Site Characterization Report
Under the Statewide Health Standard

Gatz Auto
2899 Holme Ave
Philadelphia, Philadelphia County, Pennsylvania
Facility ID # 51-30277

PREPARED FOR:

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Philadelphia, PA

SUBMITTED TO:

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1.0 Site Characterization Report Summary

The purpose of this *Site Characterization Report (SCR)* and a brief Site history are presented in the following sections:

1.1 Purpose

Synergy Environmental Inc. (Synergy) was retained by Gatz Automotive, Inc. (Gatz Auto) to complete Site characterization activities for the facility located at 2899 Holme Avenue in Philadelphia, Philadelphia County, Pennsylvania (the "Site"). On August 7, 2023, a static test of underground storage tank (UST) 003 was conducted in response to a Veeder Root leak alarm. The tank failed a static test and arrangements were made to remove the product down to 1/16th of an inch. During January 25 and 26, 2024 the three USTs at the Site were closed and removed. Analytical results from the UST closure activities indicated exceedances of the Non-Residential Statewide Health Standard (NRSHS) in Site soil. Initial Site characterization was conducted by Marshall Geosciences (Marshall). Synergy acquired the responsibility for the environmental investigation at the Site on March 25, 2024. Site characterization tasks conducted to date include the advancement of twelve soil borings resulting in the collection of seventeen soil samples to characterize and delineate soil impacts. Additionally, eight monitoring wells have been installed at the Site to assess groundwater conditions and delineate petroleum impacted groundwater.

This *Site Characterization Report under the Statewide Health Standard* for soil and groundwater is prepared for Gatz Auto for a release of unleaded gasoline that was confirmed following the failed static test of UST 003 in August 2023. The location of the Site is identified on **Figure 1**. This report documents the identified impacts to Site soil and groundwater because of a petroleum release. It is submitted to the Pennsylvania Department of Environmental Protection (PADEP) in accordance with 25 PA Code Chapter 245 (Administration of the Storage Tank and Spill Prevention Program) and is in compliance with Section 904(c) of 25 PA Code Chapter 250 (Administration of the Land Recycling Program).

According to 25 PA Code § 250.1, a "Site" is defined as "the extent of contamination originating within the property boundaries and all areas in close proximity to the contamination necessary for the implementation of remediation activities to be conducted under the act". Throughout this report, the term "Site" will be used strictly under this definition. Unless otherwise specified, all analytical results are compared to Residential and Non-Residential Statewide Health Standards (NRSHS), as presented in 25 PA Code Chapter 250, Appendix A.

1.2 Brief Site History

The subject property currently operates as an automotive repair garage located at 2899 Holme Ave. in Philadelphia, Philadelphia County, Pennsylvania. The Site is located in an area of mixed residential and commercial property usage.

The underground storage tank (UST) system at the Site at the time of the release consisted of three 8,000-gallon gasoline USTs. All three 8,000-gallon gasoline USTs were located in a shared tank pit located to the south of the gasoline dispensers and canopy. Reportedly, the 8,000-gallon gasoline USTs were installed during March 1982.

The USTs were single walled fiberglass construction. Three multi-product gasoline dispensers were located under a canopy to the south of the automotive repair garage. According to documents available for review, two other USTs in addition to this system have been installed at the Site including one 550-gallong heating oil UST and one 550-gallon waste oil UST. These two USTs are listed as removed or closed. A Detailed Site Map is included as **Figure 2**.

2.0 Site Description

The following sections are provided to describe the environmental setting at the Site and surrounding area. **Figure 1** depicts the Site location on the 7.5-minute USGS Frankford, Pennsylvania topographic quadrangle map.

2.1 Description and Site Use

The Site consists of one parcel encompassing approximately 0.41 acres. The Site is located at 2899 Holme Avenue in Philadelphia, Philadelphia County, Pennsylvania. The Site is currently developed and operated as an auto repair garage. The Site consists of one approximately 2,800 square foot office building with an attached auto repair garage. A canopy which previously sheltered three gasoline dispensers is located to the south of the auto repair garage. A Site Map is provided as **Figure 2** which identifies the locations of various Site features.

The following public utilities are located at and in the immediate vicinity of the Site: electric, telephone, municipal water and sanitary sewer. This includes both overhead and underground utilities. The depth of the utilities at the Site is unknown, however utilities are typically found three to five feet below ground surface. Potable water is supplied to the Site and immediate surrounding area by the Philadelphia Water Department.

2.2 Surrounding Properties

Land use in the surrounding area consists mixed of commercial and residential properties. Surrounding properties consist of the following:

Direction From Site	Surrounding Properties
North:	Commercial properties to the immediate north with residential apartment buildings beyond.
East:	Welsh Road borders the Site to the east. Commercial properties are located beyond.
South:	Holme Avenue and Holme Circle border the Site to the south. Residences and commercial properties are located beyond.
West:	Commercial properties border the Site to the west. Residential properties are located beyond.

2.3 Geographic Setting

The Site is located on the *USGS Frankford, Pennsylvania 7.5 Minute Topographic Quadrangle Map* at approximately 40.056611 north latitude and -75.029028 west longitude (**Figure 1**). According to the contour lines on the topographic map, the Site is located at an elevation of approximately 113 feet above mean sea level (msl). The nearest surface water body is Pennypack Creek, which is located approximately 2,050 feet west of the Site and flows south into the Delaware River. The Delaware River is located approximately 2.25 miles south of the Site.

2.4 Nature and Extent of Release

On August 7, 2023, a static test of UST 003 was conducted in response to a Veeder Root leak alarm. The tank failed the static test and arrangements were made to remove the product down to 1/16th of an inch. The three USTs were removed on January 25, 2024 and the release was confirmed when a circumferential crack in the north end of Tank 003 was noted and impact was observed in the soil. Sampled collected beneath UST003 returned soil impacts above NRSHS.

The PADEP was verbally notified of a reportable release on August 15, 2023. A written Notification of Reportable Release (NORR) was submitted to the PADEP on January 27, 2024 with regard to the discovery of a circumferential crack in UST 003 and impacted soils beneath the tank during tank closure activity. The NORR is included as **Appendix A**. Localized soil impact was identified and removed during UST excavation and post-excavation soil samples were collected. Further soil impact was identified in the post-excavation soil samples collected beneath UST 003.

2.5 Site Soils

The United States Department of Agriculture National Resources Conservation Service Web Soil Survey was consulted for information on the soils of the Site. Based on this source, the soil series at the Site was identified as Urban Land, 0 to 8 percent slopes. Urban land consists of soils which have been mixed and comingled by human activities and can no longer be classified further into individual soil series. Urban land is typically covered with structures, parking lots, roadways, or other man-made features.

2.6 Site Geology

The Site is situated within the Pensauken and Bridgeton Formations. This formation consists of dark reddish-brown, cross-stratified, feldspathic quartz sand and some thin beds of fine gravel and rare layers of clay or silt. According to the *Atlas of Preliminary Geologic Quadrangle Maps of Pennsylvania* (Pennsylvania Topographic and Geologic Survey, 1980), the Site is underlain by the Wissahickon Formation, which consists primarily of an oligoclase-mica schist. A geologic area map is included as **Figure 3**.

Based on site characterization activities performed at the Site, the unconsolidated deposits beneath the Site are composed primarily of feldspathic sands. The Site appears to be underlain with gray schist.

2.7 Site Hydrogeology

A layer of weathered rock was encountered between 32 and 36 feet bgs in the vicinity of MW-7 and MW-8. This may act as a partially confining layer for the aquifer. Water appears to have been encountered during drilling at the approximate depth as it is observed in the constructed well. Based on groundwater gauging data collected to date, static groundwater is generally encountered at depths between 35 feet and 38 feet bgs. The horizontal groundwater gradient appears to be to the west-southwest across the Site. The average horizontal groundwater gradient across the Site is approximately 0.0025 feet/feet.

3.0 Site Characterization Activities

Synergy Environmental Inc. (Synergy) acquired the responsibilities for the environmental investigation from Marshall Geosciences (Marshall) to complete Site characterization activities for the Site. As noted previously, soil impacts above respective Statewide Health Standards were identified during UST closure sampling. Following the reporting of the release, Site characterization activities conducted by Synergy have included the advancement of 12 soil borings resulting in the collection of 17 soil samples for laboratory analysis to assess soil conditions. Eight monitoring wells have been installed at the Site to identify and delineate petroleum impacted water. The following sections describe activities conducted at the Site to date.

3.1 Initial Response

UST removal activities were overseen by Marshall Geoscience, Inc. Impacted soils of this release were identified and removed during UST removal activities. Localized impact was observed in the area of soil underneath the north end of UST 003. Approximately 57 tons of impacted soils were excavated and disposed of during these activities. All UST components were closed and removed with no replacement, so the source of gasoline impact was removed from the Site. The property no longer participates in retail gasoline sales. The UST Closure Report by Marshall is included in **Appendix B**.

3.2 Soil Boring Investigation and Soil Sampling

3.2.1 August 2024 Soil Investigation

Synergy mobilized to the Site during August 16, 2024 to conduct an initial soil boring investigation to delineate and assess soil conditions at the Site. Proposed soil boring locations were selected based upon the initial release at the north end of UST 003. Prior to the advancement of the soil borings, an air knife and vacuum were utilized to pre-clear boring locations to verify the absence or presence of underground utilities within the first 5 feet of each boring location prior to the advancement of the borings. Soil was collected using a direct push truck-mounted geoprobe. A total of 6 soil borings (24-SB-1 through 24-SB-6) were advanced during the investigation. Each boring was advanced until equipment refusal or to a depth of 20 feet bgs if no evidence of impact is observed. For each boring, the recovered soils were screened with a photoionization detector (PID), inspected for visual or olfactory indications of petroleum contamination, and classified by Synergy field personnel. Samples were selected for laboratory analysis based upon PID screening results, field observations, or the soil's location relative to the initial impact.

A total of 6 samples were collected and submitted to ALS Global Laboratories of Middletown, Pennsylvania for analysis of PADEP unleaded gasoline new list parameters including: benzene, toluene, ethylbenzene, total xylenes, methyl tert-butyl ether, naphthalene, isopropylbenzene (cumene), 1,2,4 – trimethylbenzene (TMB), and 1,3,5 – TMB via EPA Method 8260C. The samples were placed in laboratory provided bottleware, labeled, and placed in a cooler packed with ice and maintained at a temperature of approximately 4˚ Celcius. Soil analytical results from the August 2024 soil investigation are summarized in **Table 1**. Soil sample locations are depicted on **Figure 4**. The laboratory analytical report is included in **Appendix C**. Analytical results from the August 2024 soil investigation are discussed in **Section 3.2.3.**

3.2.2 November 2024 Soil Boring Investigation

During November 4-5, 2024, Synergy returned to the Site and advanced 6 additional soil borings (24-SB-7 through 24-SB-12). The locations of the soil borings were selected based upon the analytical results from the previous soil boring event conducted during August 2024. Prior to the advancement of the soil borings, an air knife and vacuum were utilized to pre-clear boring locations to verify the absence or presence of underground utilities within the first 5 feet of each boring location. Soil was collected using a direct push truck-mounted geoprobe. Each boring was advanced until equipment refusal or to a depth of 20 feet bgs if no evidence of impact is observed. For each boring, the recovered soils were screened with a photoionization detector (PID), inspected for visual or olfactory indications of petroleum contamination, and classified by Synergy field personnel. Samples were selected for laboratory analysis based upon PID screening results, field observations, or the soil's location relative to the previously identified impact.

A total of 11 samples were collected and submitted to ALS Global Laboratories of Middletown, Pennsylvania for analysis of PADEP unleaded gasoline new list parameters for this round of soil sampling. The samples were placed in laboratory provided bottleware, labeled, and placed in a cooler packed with ice and maintained at a temperature of approximately 4˚ Celcius. Soil analytical results from the November 2024 soil investigation are summarized in **Table 1**. Soil sample locations are depicted on **Figure 4**. The laboratory analytical report is included in **Appendix D**. Analytical results from the November 2024 soil investigation are discussed in **Section 3.2.3.**

3.2.3 Soil Analytical Results

Soil analytical results from the soil boring investigation samples are presented below.

Soil Boring Investigation Sampling Results - Exceedances of NRSHS

Soil analytical results from the August 2024 soil boring investigation indicated that one of the six samples collected during the event reported at least one parameter in exceedance of a respective NRSHS. Analytical results indicated exceedances of benzene, toluene, and ethylbenzene in 24-SB-1. Benzene was detected exceeding the NRSHS (0.5 mg/kg) with a concentration of 5.56 mg/kg. Toluene was detected exceeding the NRSHS (100 mg/kg) with a concentration of 183 mg/kg. Ethylbenzene was detected exceeding the NRSHS (70 mg/kg) with a concentration of 70.5 mg/kg. The locations and analytical results of the August 2024 soil boring investigation are shown on **Figure 4**. Analytical results for the soil samples collected during the soil boring investigation are summarized on **Table 1**. The analytical laboratory report is attached as **Appendix C**.

Soil analytical results from the November 2024 soil boring investigation indicated that none of the six borings identified any target parameters in exceedance of NRSHS. The locations and analytical results of the November 2024 soil boring investigation were selected to delineate impacts from the August 2024 soil sampling event and are shown on **Figure 4**. Analytical results for the soil samples collected during the soil boring investigation are summarized on **Table 1**. The analytical laboratory report is attached as **Appendix D**.

3.3 Groundwater Investigation

The following sections describe the tasks completed as part of the groundwater investigation conducted at the Site.

3.3.1 Monitoring Well Installation

Following the identification of soil impact at refusal, monitoring wells were installed to identify groundwater impacts at the Site. During November 6-7, 2024, four monitoring wells were installed under Synergy supervision. Monitoring wells MW-1 through MW-4 were installed utilizing an air rotary drill rig and completed as a 2-inch PVC wells. Each well was completed to a depth of approximately 50 feet below ground surface with 30 feet of 0.010 slot screened PVC and 20 feet of solid PVC riser to the surface. Each well was finished within a protective manway and concrete well pad and secured with locking well caps.

During February 24 - 25, 2025, four additional monitoring wells were installed under Synergy supervision. The additional monitoring wells were required to characterize groundwater impacts identified in the previously installed monitoring wells. Monitoring wells MW-5 through MW-8 were installed utilizing an air rotary drill rig. These wells were also installed to depths of approximately 50 feet bgs with 25 feet of 0.010 slot screened PVC. Well logs are included as **Appendix E**. **Figure 2** depicts the monitoring well locations.

3.3.2 Groundwater Sampling

Five rounds of groundwater samples have been conducted at the Site since Site characterization was initiated. Synergy conducted groundwater sampling activities during November 22, 2024, December 13, 2024, and January 17, 2025 for the original monitoring well network of MW-1 through MW-4. Synergy also conducted groundwater sampling activities during March 13, 2025 and April 9, 2025 for the complete monitoring well network of MW-1 through MW-8. Groundwater samples collected at the Site have been analyzed for Pennsylvania unleaded gasoline (new list) (PAUG) short list target parameters including: benzene, toluene, ethylbenzene, total xylenes, MTBE, isopropylbenzene (cumene), naphthalene, 1,2,4-TMB, and 1,3,5-TMB

During groundwater sampling events, the monitoring wells were gauged and the depth to water and total depth of each well were measure with an oil/water interface probe capable of measuring water and/or LNAPL to within 0.01 feet. The interface probe was decontaminated between each well using Alconox and distilled water to avoid potential cross-contamination. Following gauging, volumetric measurements were calculated and the wells were purged through granular activated carbon units.

Following purging, samples were collected using a dedicated polyethylene bailer and string. The bailer was slowly lowered into the well for sample collection to avoid the potential for sample volatilization. The groundwater collected within the bailer was then transferred to laboratory provided bottleware. The sample bottleware contained hydrochloric acid (HCl) as a preservative. Samples were labeled and immediately placed in an ice packed cooler maintained at approximately 4˚ Celcius. The samples were dropped off at an associated ALS service center. The samples were handled under typical chain-of-custody procedures from the time of sample through analysis at the laboratory. The two most recent groundwater sampling events of the full monitoring well network are described below.

3.3.2.1 March 13, 2025 Sampling Event

Monitoring wells MW-1 through MW-8 were gauged, purged and sampled as part of this sampling event. Depth to groundwater measurements ranged from 35.94 (MW-8) feet to 38.13 (MW-6) feet from top of casing. Groundwater elevations ranged from 72.99 (MW-6) to 73.23 (MW-1). LNAPL was not detected in any of the monitoring wells. Groundwater flow was determined to be towards the west-southwest with a gradient of 0.0025 ft/ft based upon gauging data. Groundwater analytical results are discussed in **Section 3.4.2**.

Figure 5 shows the groundwater contours and flow direction for the sampling event. **Figure 6** depicts the groundwater analytical data for this sampling event. Groundwater gauging and analytical data are summarized on **Table 2**. The analytical laboratory report from the groundwater sampling event is attached as **Appendix F**.

3.3.2.2 April 9, 2025 Sampling Event

Monitoring wells MW-1 through MW-8 were gauged, purged and sampled as part of this sampling event. Depth to groundwater measurements ranged from 36.22 (MW-8) feet to 38.34 (MW-6) feet from top of casing. Groundwater elevations ranged from 72.78 (MW-6) to 73.02 (MW-1). LNAPL was not detected in any of the monitoring wells. Groundwater flow was determined to be towards the west with a gradient of 0.0025 ft/ft based upon gauging data. Groundwater analytical results are discussed in **Section 3.4.2**.

Figure 7 shows the groundwater contours and flow direction for the sampling event. **Figure 8** depicts the groundwater analytical data for this sampling event. Groundwater gauging and analytical data are summarized on **Table 2**. The analytical laboratory report from the groundwater sampling event is attached as **Appendix G**.

3.4 Results of Site Characterization Study

The following sections detail the results of the Site characterization activities performed at the Site:

3.4.1 Soil Quality

The two soil boring investigations conducted at the Site to date have indicated that soil impact was identified at one location in 24-SB-1. The impact in 24-SB-1 was noted at 17.5 to 18 feet bgs. Refusal was encountered at 18 feet bgs, so a deeper soil sample could not be obtained in that soil boring. Benzene, toluene and ethylbenzene have all been detected in exceedance of their respective NRSHS. The identified soil impact at 24-SB-1 is located in the vadose zone with the first water table encountered around 35 feet bgs. A number of soil borings were advanced around 24-SB-1 in order to delineate the identified impact, but all samples returned all gasoline parameters below NRSHS. **Table 1** provide the analytical result summaries from each soil sampling event. **Figure 4** depicts a comprehensive view of sampling locations and soil sampling analytical results for samples collected to date. Analytical laboratory reports are included as **Appendices C** and **D**.

3.4.2 Groundwater Quality – Exceedances of the NRSHS

Five groundwater sampling events have been conducted at the Site since characterization activities were initiated. The initial sampling event was conducted during November 22, 2024. The following exceedances were reported for this sampling event:

- MW-1: benzene (203 µg/L)
- MW-2: benzene (20.2 µg/L) and MTBE (22.1 µg/L)

In the four groundwater sampling events that have occurred since this initial event, benzene has been identified above NRSHS in MW-3 and there has been one detection of benzene above NRSHS in MW-4, which has not been replicated. No LNAPL has been identified at the Site in any of the groundwater sampling events conducted to date.

After three groundwater sampling events of MW-1 through MW-4, an additional four wells (MW-5 through MW-8) were installed at the Site to address groundwater impact delineation. There have not yet been detections of PAUG parameters above NRSHS in these additional wells. **Figures 5** through **8** depict the groundwater analytical summary for the most recent two sampling events at the Site. Groundwater gauging and analytical data are summarized on **Table 2**.

4.0 Vapor Intrusion Evaluation

A vapor intrusion screening of the Site was conducted. The following sections detail the vapor intrusion evaluation. For this evaluation, The PADEP Vapor Intrusion Guidance Manual, document 261-0300-100, effective March 27, 2021 (guidance) was utilized to assess potential vapor intrusion.

4.1 Soil Evaluation

Soil analytical data collected to date indicted benzene, toluene, ethylbenzene, total xylenes, naphthalene, 1,2,4-TMB, and 1,3,5,TMB present in Site soil above their respective SHS Vapor Intrusion Soil Screening Values. The guidance states that the vertical proximity distance is five feet and the horizontal distance is 30 feet for adsorbed phase contamination. The nearest exceedance to the occupied auto garage is 24-SB-1, which is located 17.5 feet below ground surface and 50 horizontal feet from the garage. Therefore, the soil exceedances above the Vapor Intrusion Soil Screening Values would not represent a potential source of vapors to the onsite building. Evaluation of analytical collected to date and the use of the proximity distances presented within the guidance indicated Site soil does not present a vapor intrusion risk at this time. Since the exceedances observed in Site soil are either at depths greater than 5 feet (with acceptable soil material above) and/or greater than 30 feet from the Site building, there is adequate distance for biodegradation to occur to reduce concentrations to acceptable levels.

4.2 Groundwater Evaluation

From the groundwater analytical data collected to date, only benzene has historically been detected at concentrations in exceedance of its respective Groundwater SHS Vapor Intrusion Screening Value in MW-1 and MW-3. The guidance states that the vertical proximity distance for petroleum-impacted groundwater is 5 feet. The shallowest depth to groundwater measurement collected during gauging was 35.02 feet below top of casing. This measurement was the shallowest any groundwater was identified within a Site well. Therefore, due to the vertical distance to the petroleum impacted groundwater, the vertical proximity distance would indicate there is adequate distance for biodegradation to occur to reduce concentrations to acceptable levels. Additionally, no exceedances of groundwater screening values or LNAPL have been noted to date within 30 feet of the Site building. Therefore, based on the analytical data collected to date, Site groundwater does not present a vapor intrusion risk at this time.

4.3 Vapor Intrusion Conclusion – Not A Concern

Based upon the soil and groundwater analytical data collected to date and review of the PADEP Vapor Intrusion Guidance Manual, conditions do not currently exist at the Site that would warrant a vapor intrusion investigation. These conditions along with evaluation of offsite vapor receptors will continue to be evaluated as the investigation at the Site progresses.

5.0 Sensitive Receptor Survey

Reconnaissance of the Site and surrounding area includes: the locations of surface water bodies, utilities and other potentially sensitive receptors. The results of the reconnaissance are as follows:

- The existing structure onsite does contain a basement under the auto repair building.
- Several residential properties are located near, but not adjacent, to the Site.
- The nearest surface water body is Pennypack Creek (downgradient) located approximately 2,050 feet miles west of the Site and flows generally southward toward the Delaware River.

Public water is provided to the Site and surrounding area by The Philadelphia Water Department.

5.1 Ecological Screening Process - Soil

Soil analytical data indicates exceedances of the NRSHS for several target compounds. However, the Site is covered by buildings and pavement that eliminate direct contact exposure to any impacted soils. In addition, impacted material has generally been identified at depths of 16 feet or greater below surface as soils above that location were excavated during UST removal.

Based on this information, direct contact to impacted soil is not considered an exposure pathway, and no further evaluation is required.

5.2 Groundwater

Surface waterways are located downgradient from the Site based the groundwater flow direction calculated from the quarterly groundwater sampling events. Surface water is not present on the Site and the nearest downgradient waterbody is approximately 2,050 west of the Site. Groundwater analytical data has identified target compounds exceeding the NRSHS. Based on the analytical data collected to date and the Fate and Transport analysis in **Section 7.0**, it does not appear like that compounds exceeding the NRSHS will migrate off-site. Surface water bodies are not anticipated to impacted by the release at the Site.

Based on this information, surface water is not considered an exposure pathway. Further evaluation, through the installation of off-site monitoring wells if access can be granted, is required to determine if petroleum impacts have migrated past the property boundaries.

5.3 PADCNR Pennsylvania Groundwater Information System

A database search was conducted on Pennsylvania Ground Water Information System (PAGWIS) accessed through the PaGEODE webservice for a half a mile radius from the site and six wells were identified outside of the Site. Five of the wells were designated as monitoring and one was designated as destroyed. It is not anticipated that any of the neighboring wells will be impacted by the Site. A PAGWIS summary is included in **Table 3**.

5.4 Pennsylvania Natural Diversity Inventory Review

To further evaluate the potential for sensitive subpopulations in the vicinity of the Site, a Pennsylvania Natural Diversity Inventory (PNDI) project environmental review was conducted. The search did not identify species of concern listed under the Endangered Species Act of 1973, the Wild Resources Conservation Act, or the PA Game and Wildlife Code within 2,500 feet of the Site. The results are pending further review at the time of this submission by the PA Fish and Boat Commission. The results from the PNDI search are included as **Appendix H**.

6.0 Interim Remedial Activities

UST removal activities were overseen by Marshall Geoscience, Inc. Impacted soils of this release were identified and removed during UST removal activities. Localized impact was observed in the area of soil underneath the north end of UST 003. Approximately 57 tons of impacted soils were excavated and disposed of during these activities. All UST components were closed and removed with no replacement, so the source of gasoline impact was removed from the Site. The property no longer participates in retail gasoline sales.

Light non-aqueous phase liquid (LNAPL) has not been encountered at the Site during any of the groundwater sampling events, so no product recovery has been necessary in the monitoring wells at the Site. Synergy will review the possible need for offsite monitoring wells as well as further remedial activities in the Remedial Action Plan to be submitted within 45 days of this report.

7.0 Fate and Transport Analysis

The following sub-sections present the values selected for the various required input parameters, and the results of the modeling exercise.

7.1 Conceptual Site Model

The conceptual model for this Site is that a release occurred from the previous tank system and the release impacted soils and groundwater in the area of the former tank system, immediately south of the remaining canopy.

On August 7, 2023, a static test of underground storage tank (UST) 003 was conducted in response to a Veeder Root leak alarm. The tank failed and the Tanks were taken out of commission and subsequently removed in January 2024. During removal, soil samples collected underneath the USTs indicated petroleum impact under UST 003, which had a circumferential crack in it. Since the USTs have been removed, there is no other source of petroleum substances underground at the Site. Delineation soil samples collected by Synergy have confined the area of soil impact to the initial area underneath UST 003. Soil samples around that area have had concentrations of gasoline parameters below NRSHS.

Synergy proceeded to install four monitoring wells onsite with MW-1 being installed in the same area as the soil boring where impact was identified. Sampling of that initial monitoring well network identified benzene impact in the source well, as well as impact in MW-2 and MW-3, which roughly align along the gradient. MW-3 is upgradient of the source well, MW-1, so impacts to MW-3 appear to be from a separate source. There was also MTBE identified in MW-2, which has not been identified in any other well installed to date. MW-2 is located a significant distance away from the former UST field, which would be a known source of gasoline impact. Four additional wells were installed at the Site to delineate the groundwater impacts identified in the original monitoring well network. None of these additional wells have identified gasoline impacts above NRSHS and the area of impacts appears to be in a line roughly following the gradient from northeast to southwest. No separate phase hydrocarbons have been identified in any of the monitoring wells.

Synergy has evaluated the groundwater data available for the Site. This section discusses the groundwater contaminant fate and transport modeling used to approximate the extent of dissolved phase benzene. Benzene is the most mobile of the constituents of concern at the Site and was therefore used as the most conservative for modeling. MW-1 was chosen to represent the source area since it is located closest to the source area of the former UST field and where soil impacts were identified. At this time, the model described below is conducted as a conservative estimate using worst-case-scenario data. The source concentration used is the highest concentration of benzene detected during the Site Characterization period. Additionally, the model assumes a constant source of the impact, while the source of the impact at the Site has been removed with the complete closure and removal of the UST system. It is not a calibrated model and is being viewed as an estimation tool.

7.2 Model Description

Quick Domenico (QD) was used to calculate the distance and concentrations of dissolved organic constituents over a 30-year period to estimate the extent of contaminant transport for

contaminants in groundwater. The QD model assumes steady-state flow conditions in a homogeneous, unconsolidated aquifer. The model considers first-order decay, retardation and three-dimensional dispersion. In the QD model, concentrations are calculated for a single species and reactions between constituents are not considered. The QD model provides a conservative estimate of compound migration based on the assumption that contaminants are continuously introduced into the aquifer at the specified input concentration and over the entire specified time period being modeled.

7.3 Model Input Parameters

Source Concentrations: **Starting Concentrations and Date:**

5 year and 30-Year Prediction

Benzene MW-1: 0.666 mg/l (max. over SC period)

Dispersivity Values: Dispersivity values were calculated following the basic principles below utilizing time intervals specific to the term of the model prediction.

A_x = X/10; where X = groundwater velocity ($V_{seepage}$) * Time
Ay = Ax/10
Az = 0.0001 (QD default value)
$V_{seepage}$ = (hydraulic conductivity * hydraulic gradient) / (effective porosity)

Attenuation Lambda (reference values from 25 PACode §250):

Benzene 0.000958

KOC (reference values from 25 PACode §250):

Benzene 58

Source Width: 30 feet (approximate width of former UST field)

Source Thickness: 3 feet (~smear zone thickness)

Hydraulic Conductivity ($K_{GeoMean}$): 0.39 feet/day (Calculated from pump test by previous consultant, Mulry and Cresswell Environmental, Inc. (2000), **Appendix I**)

Hydraulic Gradient ($\Delta h/lA_{verage}$): 0.0025 feet/feet (April 9, 2025 data)

Effective Porosity (n_e): 0.3 (book value based on rock type)

Soil Bulk Density: 1.8 g/cm^3

Fraction of Organic Carbon: 0.005

Term (predication): 30 year (10,950 days)

7.4 Fate and Transport Model Results

- MW-5 – Benzene 30-year model: 14 feet at a concentration of 0.005 mg/l

A copy of the QD model spreadsheet are provided in **Appendix J** for reference.

8.0 Conclusions

The following is a summary of the conclusions and recommendations for the Site, based upon the information presented in this Site Characterization Report.

- *Soil Investigation*
    - A total of 17 soil samples have been collected from 12 soil boring locations during the August and November 2024 sampling events.
    - Of the 17 soil samples collected, only one contained concentrations of at least one PAUG target parameter in exceedance of its respective NRSHS.
    - Of the 12 soil borings, analytical data indicated one contained concentrations of at least one PAUG target parameter in exceedance of its respective standard.
    - Benzene, toluene, and ethylbenzene have all been detected in exceedance of their respective NRSHS in 24-SB-1.
    - Benzene, toluene, and ethylbenzene were also detected above their respective Soil Vapor Intrusion Screening Values in samples 24-SB-1 and 24-SB-2. The samples were both collected beyond the 30 ft. horizontal proximity distance to the occupied Site structure.
    - The soil sample exceeding NRSHS is located at 17.5-18 ft. bgs., where refusal was encountered during the soil boring investigation. This is well above the water table, which is located between approximately 35 and 38 ft. bgs.
    - Based on a review of the soil data presented within this report, soil impacts have been delineated at the Site.

- *Groundwater Investigation*
    - A total of eight monitoring wells (MW-1 through MW-8) have been installed at the Site.
    - Depth to water levels range from 35 to 39 ft. bgs.
    - Separate phase liquids have not been identified in groundwater at the Site.
    - Groundwater flow direction at the Site is generally to the west-southwest.
    - Hydraulic gradient at the Site is approximately 0.0025 ft/ft (April 9, 2025 data).
    - Benzene has been consistently detected above its respective NRSHS in MW-1 through MW-3.
    - MTBE has been consistently detected above its respective NRSHS in MW-2.
    - There have been singular detections of Toluene in MW-1 and of benzene in MW-4 above their respective NRSHS, which have not been replicated.
    - Fate and transport model results indicate unleaded gasoline compounds are not expected to migrate off-Site under current conditions.

- *Vapor Intrusion* – Based on the reported groundwater and soil data to date, vapor intrusion is not an exposure pathway for Site occupants or adjoining property occupants, but additional evaluation is necessary prior to eliminating all pathways
- Potential preferential pathways along utilities in the area need to be evaluated.
- *Soil and Groundwater Remediation* – Synergy will submit a Remedial Action Plan (RAP) within 45 days which will include additional site characterization work necessary and information on remediation remedies for onsite soils and groundwater.

9.0 Recommendations

9.1 Quarterly Monitoring

Synergy proposes to continue to conduct quarterly groundwater monitoring of the complete monitoring well network to assess the progress of the identified impacts of Site groundwater. Synergy will submit a Remedial Action Progress Report (RAPR) to PADEP after each quarter, assessing the events and results of the previous quarter.

9.2 Remedial Action Plan

Synergy will submit a Remedial Action Plan (RAP) to PADEP within 45 days of submitting this SCR detailing the remedial approach Synergy plans to undertake for soil and groundwater. The RAP will discuss the Site conditions and the methods of approach to attain NRSHS in the impacted media.

10.0 References

Geyer, A.R., and Wilshusen, J.P., 1982, Engineering Characteristics of the Rocks of Pennsylvania: Pennsylvania Geological Survey, Environmental Geology Report.

Title 25, Pennsylvania Code, Chapter 245: Administration of the Storage Tank and Spill Prevention Program.

Title 25, Pennsylvania Code, Chapter 250: Administration of the Land Recycling Program.

Berg, T.M., Edmunds, W.E., Geyer, A.R., and others, compilers, 1980, Geologic map of Pennsylvania: Pennsylvania Geological Survey, 4th ser., Map 1, 2nd ed., 3 sheets, scale 1:250,000.

Pennsylvania Bureau of Topographic and Geologic Survey, Department of Conservation and Natural Resources, Miles, C.E., and Whitfield, T.G., compilers, 2001, Bedrock Geology of Pennsylvania, edition: 1.0, digital map, scale 1:250,000.

TABLES

Table 1
Soil Analytical Data Summary
Gatz Auto
2899 Holme Ave., Philadelphia, PA
Synergy Project No. 24-01483

Sample ID	Date	Approximate Sample Depth (feet bgs)	PID (ppm/v)	Benzene (mg/kg)	Q	Toluene (mg/kg)	Q	Ethylbenzene (mg/kg)	Q	MTBE (mg/kg)	Q	Isopropyl benzene (mg/kg)	Q	Naphthalene (mg/kg)	Q	1,2,4-TMB (mg/kg)	Q	1,3,5-TMB (mg/kg)	Q	Total Xylenes (mg/kg)	Q
Statewide Health Standards - Soil to Groundwater [3]				0.5		100		70		2		2,500		25		300		93		1,000	
Statewide Health Standards - Vapor Intrusion Screening Values [3]				0.13		44		46		1.4		2,500		25		300		93		990	
Subsurface Soil Standards (2 to 15') [3]				330		10,000		1,000		9,800		10,000		77		5,400		5,400		9,100	
24-SB-1	8/16/2024	17.5-18	1327	**5.56**		**183**		**70.5**		ND (0.283)		9.76		7.93		214		57.7		535	
24-SB-2	8/16/2024	19.5-20	35.3	0.444		0.836		0.164		ND (0.0613)		ND (0.0613)		ND (0.123)		0.307		0.0791		0.969	
24-SB-3	8/16/2024	15-15.5	0.3	ND (0.0588)		ND (0.0588)		ND (0.0588)		ND (0.0588)		ND (0.0588)		ND (0.118)		0.267		0.106		ND (0.176)	
24-SB-4	8/16/2024	14.5-15	1.1	ND (0.0634)		ND (0.0634)		ND (0.0634)		ND (0.0634)		ND (0.0634)		ND (0.127)		0.966		ND (0.0634)		ND (0.190)	
24-SB-5	8/16/2024	15.5-16	0.0	ND (0.0758)		0.0891		ND (0.0758)		ND (0.0758)		ND (0.0758)		ND (0.152)		ND (0.0758)		ND (0.0758)		ND (0.227)	
24-SB-6	8/16/2024	15.5-16	0.0	ND (0.0471)		ND (0.0471)		ND (0.0471)		ND (0.0471)		ND (0.0471)		ND (0.0943)		ND (0.0471)		ND (0.0471)		ND (0.141)	
24-SB-7	11/5/2024	17.5-18	0.0	ND (0.0628)		ND (0.0628)		ND (0.0628)		ND (0.0628)		ND (0.0628)		ND (0.126)		ND (0.0628)		ND (0.0628)		ND (0.188)	
24-SB-8	11/5/2024	17.5-18	0.0	ND (0.0607)		ND (0.0607)		ND (0.0607)		ND (0.0607)		ND (0.0607)		ND (0.121)		ND (0.0607)		ND (0.0607)		ND (0.182)	
24-SB-9	11/5/2024	13.5-14	0.0	ND (0.0739)		ND (0.0739)		ND (0.0739)		ND (0.0739)		ND (0.0739)		ND (0.148)		ND (0.0739)		ND (0.0739)		ND (0.222)	
24-SB-10	11/5/2024	17.5-18	0.0	ND (0.0681)		ND (0.0681)		ND (0.0681)		ND (0.0681)		ND (0.0681)		ND (0.136)		ND (0.0681)		ND (0.0681)		ND (0.204)	
24-SB-10D	11/5/2024	19.5-20	397.1	ND (0.0539)		0.0599		0.903		ND (0.0539)		0.353		9.24		24.1		6.79		6.56	
24-SB-10DD	11/5/2024	22.5-23	671.5	0.0808		5.84		16.7		ND (0.0584)		4.24		21.4		152		46.5		111	
24-SB-11	11/5/2024	17.5-18	0.0	ND (0.0621)		ND (0.0621)		ND (0.0621)		ND (0.0621)		ND (0.0621)		ND (0.124)		ND (0.0621)		ND (0.0621)		ND (0.186)	
24-SB-11D	11/5/2024	19.5-20	0.0	ND (0.0624)		ND (0.0624)		ND (0.0624)		ND (0.0624)		ND (0.0624)		ND (0.125)		ND (0.0624)		ND (0.0624)		ND (0.187)	
24-SB-12	11/5/2024	17.5-18	0.0	ND (0.0636)		ND (0.0636)		ND (0.0636)		ND (0.0636)		ND (0.0636)		ND (0.127)		ND (0.0636)		ND (0.0636)		ND (0.191)	
24-SB-12D	11/5/2024	19.5-20	0.0	ND (0.0608)		ND (0.0608)		ND (0.0608)		ND (0.0608)		ND (0.0608)		ND (0.122)		ND (0.0608)		ND (0.0608)		ND (0.182)	
24-SB-12DD	11/5/2024	21.5-22	0.0	ND (0.0633)		ND (0.0633)		ND (0.0633)		ND (0.0633)		ND (0.0633)		ND (0.127)		ND (0.0633)		ND (0.0633)		ND (0.190)	

Total Number of Samples				17		17		17		17		17		17		17		17		17	
Total Number of Detections				3		5		4		0		3		3		6		5		4	
Total Number of Exceedances - STG				1		1		1		0		0		0		0		0		0	
Total Number of Exceedances - Vapor Intrusion				2		1		1		0		0		0		0		0		0	
Total Number of Exceedances - DC				0		0		0		0		0		0		0		0		0	

1. mg/Kg - Milligrams per Kilogram
   bgs - Below Ground Surface
   N/A - Not applicable
   ND - Not detected at RL in ( )
   RL - Reporting Limit
   Q - Qualifier
   STG - Soil to Groundwater
   VI - Vapor Intrusion
   DC - Direct Contact
2. See laboratory report for additional information.
3. PADEP Act 2 Non-Residential Statewide Health Standards (Soil) and Guidance Values (Vapor Intrusion). Exceedances are indicated as follows:

STG
VI
DC

Table 2 Historic Groundwater Sampling Data Summary
Gatz Auto - 2899 Holme Avenue Philadelphia, PA
Facility ID No. 51-30277
Synergy Project No. 24-01483

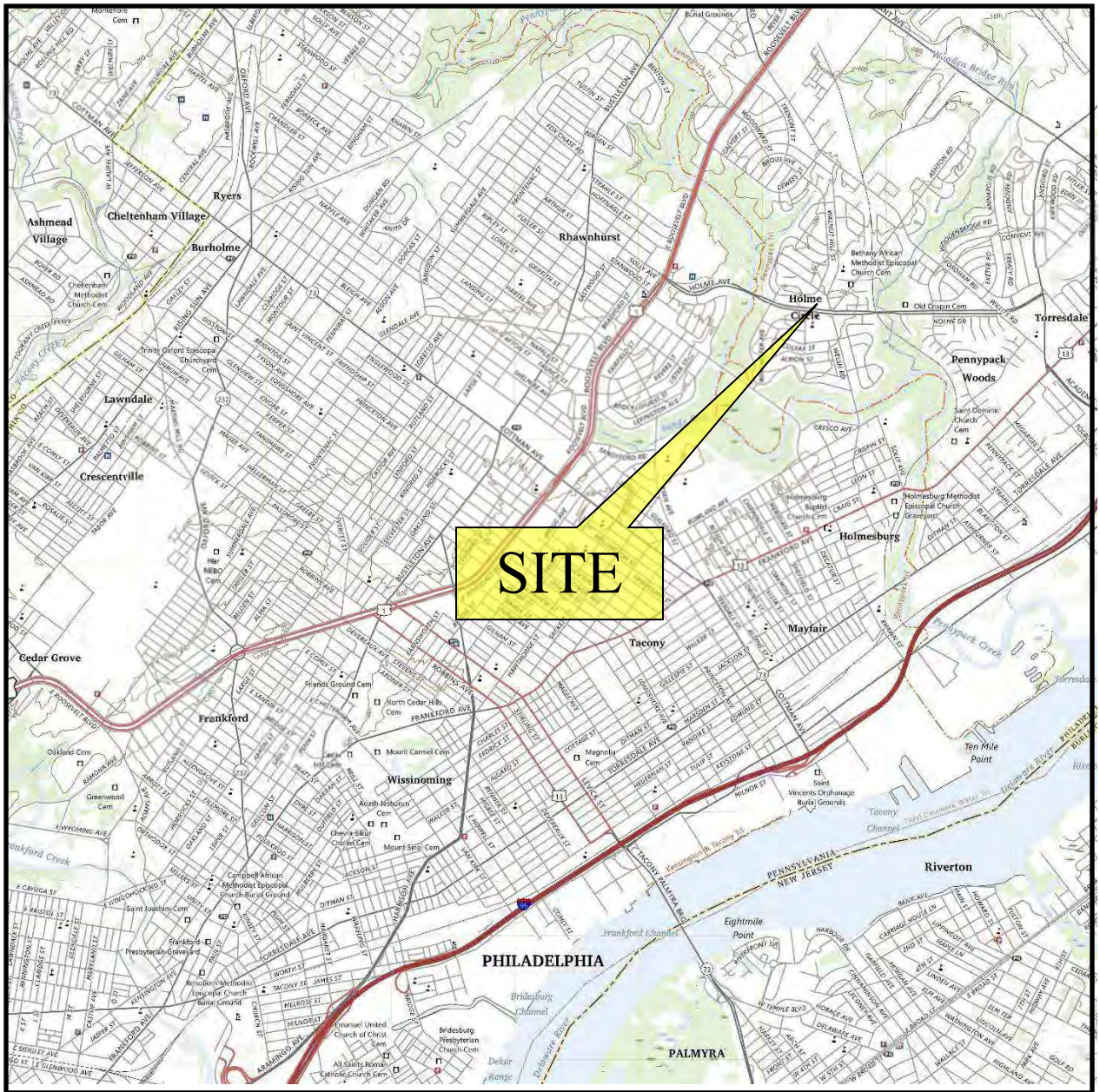
Well ID	Date	Top of Casing (ft.)	Depth To Bottom	Depth To Water	Depth to Product	Product Thickness	Ground Water Elevation	Benzene	Q	Toluene	Q	Ethyl benzene	Q	MTBE	Q	Naphthalene	Q	Cumene	Q	1,2,4 TMB	Q	1,3,5 TMB	Q	Total Xylenes	Q
			(feet)	(feet)	(feet)	(feet)	(feet)	(µg/L)		(µg/L)		(µg/L)		(µg/L)		(µg/L)		(µg/L)		(µg/L)		(µg/L)		(µg/L)	
PADEP Act 2 Statewide Health- Non-Residential Used Aquifer								5		1,000		700		20		100		3,500		530		530		10,000	
PADEP Groundwater Non-Residential Vapor Intrusion Screening Values								350		430,000		860		96,000		1,300		24,000		6,400		4,500		12,000	
MW-1	11/22/2024	111.11	50.32	36.47	NP	0.00	74.64	**203**		839		75.3		ND (1.0)		0.35	*J*	3.5		33.6		10.0		485	
	12/13/2024	111.11	50.32	36.87	NP	0.00	74.24	***622***		**1970**		161		ND (10.0)		ND (20.0)		ND (10.0)		39.9		11.9		774	
	1/17/2025	111.11	50.32	37.27	NP	0.00	73.84	**330**		541		65.5		ND (10.0)		9.0	*J*	6.5	*J*	78.8		21.1		327	
	3/13/2025	111.11	50.32	37.88	NP	0.00	73.23	**136**		211		45.4		ND (10.0)		ND (20.0)		ND (10.0)		ND (10.0)		ND (10.0)		109	
	4/9/2025	111.11	50.32	38.09	NP	0.00	73.02	**98.6**		196		29.4		0.66	*J*	ND (2.0)		2.3		11.6		4.5		165	
MW-2	11/22/2024	110.85	50.31	36.23	NP	0.00	74.62	**20.2**		28.5		7.5		**22.1**		24.8		4.1		21.2		11.7		31.6	
	12/13/2024	110.85	50.31	36.72	NP	0.00	74.13	**24.4**		28.3		8.7		16.6		44.5		8.3		24.3		14.0		32.6	
	1/17/2025	110.85	50.31	37.13	NP	0.00	73.72	**34**		1.4		7.6		**31**		43.5		6.3		29.5		19.8		29.7	
	3/13/2025	110.85	50.31	37.77	NP	0.00	73.08	**54**		1.4		10.2		**23.7**		45.7		11.3		30.8		28.6		35.4	
	4/9/2025	110.85	50.31	37.99	NP	0.00	72.86	**48.5**		1.4		8.0		**26.6**		29.6		8.0		23.3		22.3		28.5	
MW-3	11/22/2024	109.61	50.25	35.02	NP	0.00	74.59	1.5		0	*J*	ND (1.0)		7.9		ND (2.0)		ND (1.0)		ND (1.0)		ND (1.0)		1.0	
	12/13/2024	109.61	50.25	35.44	NP	0.00	74.17	**85**		ND (1.0)		ND (1.0)		6.5		ND (2.0)		ND (1.0)		ND (1.0)		ND (1.0)		6.8	
	1/17/2025	109.61	50.25	35.76	NP	0.00	73.85	**163**		ND (1.0)		ND (1.0)		5.2		1	*J*	0.93	*J*	0.32	*J*	ND (1.0)		11.1	
	3/13/2025	109.61	50.25	36.41	NP	0.00	73.20	***421***		ND (1.0)		ND (1.0)		4.5		ND (2.0)		3.0		ND (1.0)		ND (1.0)		21.2	
	4/9/2025	109.61	50.25	36.66	NP	0.00	72.95	***416***		ND (5.0)		ND (5.0)		5.0	*J*	ND (10.0)		3.4	*J*	ND (5.0)		ND (5.0)		21.8	
MW-4	11/22/2024	110.66	50.18	36.05	NP	0.00	74.61	0.24	*J*	0.2	*J*	ND (1.0)		ND (1.0)		ND (2.0)		ND (1.0)		ND (1.0)		ND (1.0)		ND (3.0)	
	12/13/2024	110.66	50.18	36.46	NP	0.00	74.20	**7.9**		67.8		5.6		ND (1.0)		ND (2.0)		ND (1.0)		1.7		ND (1.0)		31.1	
	1/17/2025	110.66	50.18	36.85	NP	0.00	73.81	0.68	*J*	ND (1.0)		ND (1.0)		0.58	*J*	ND (2.0)		ND (1.0)		0.72	*J*	0.24	*J*	1.4	*J*
	3/13/2025	110.66	50.18	37.49	NP	0.00	73.17	ND (1.0)		ND (1.0)		ND (1.0)		ND (1.0)		ND (2.0)		ND (1.0)		ND (1.0)		ND (1.0)		ND (3.0)	
	4/9/2025	110.66	50.18	37.72	NP	0.00	72.94	ND (1.0)		ND (1.0)		ND (1.0)		0.84	*J*	ND (2.0)		ND (1.0)		ND (1.0)		ND (1.0)		ND (3.0)	
MW-5	3/13/2025	110.21	50.01	37.17	NP	0.00	73.04	ND (1.0)		ND (1.0)		7.0		4.0		34.2		12.3		198		54.7		43.1	
	4/9/2025	110.21	50.01	37.37	NP	0.00	72.84	ND (5.0)		1.4	*J*	5.5		2.0	*J*	22.0		13.4		166		49.8		23.5	
MW-6	3/13/2025	111.12	49.85	38.13	NP	0.00	72.99	ND (1.0)		ND (1.0)		ND (1.0)		ND (1.0)		ND (2.0)		ND (1.0)		ND (1.0)		ND (1.0)		ND (3.0)	
	4/9/2025	111.12	49.85	38.34	NP	0.00	72.78	1.3		12.7		1.1		ND (1.0)		ND (2.0)		0.76	*J*	0.77	*J*	0.28	*J*	13.2	
MW-7	3/13/2025	110.29	47.84	37.10	NP	0.00	73.19	ND (1.0)		ND (1.0)		ND (1.0)		ND (1.0)		ND (2.0)		ND (1.0)		ND (1.0)		ND (1.0)		ND (3.0)	
	4/9/2025	110.29	47.84	37.34	NP	0.00	72.95	ND (1.0)		ND (1.0)		ND (1.0)		0.42	*J*	ND (2.0)		ND (1.0)		ND (1.0)		ND (1.0)		ND (3.0)	
MW-8	3/13/2025	109.14	38.85	35.94	NP	0.00	73.20	ND (1.0)		ND (1.0)		ND (1.0)		ND (1.0)		ND (2.0)		ND (1.0)		ND (1.0)		ND (1.0)		ND (3.0)	
	4/9/2025	109.14	38.85	36.22	NP	0.00	72.92	ND (1.0)		ND (1.0)		ND (1.0)		ND (1.0)		ND (2.0)		ND (1.0)		ND (1.0)		ND (1.0)		ND (3.0)	
			Total Number of Samples					28		28		28		28		28		28		28		28		28	
			Number of Detections					19		15		14		16		10		14		15		13		20	
			Number of Excedances Residential Statewide Health Standard					15		1		0		4		0		0		0		0		0	

Notes:
- = Not gauged, not calculated, not sampled, or not analyzed
BOLD = exceedence of the PADEP Act 2 Non-Residential Used Aquifer Statewide Health Standard,.
ITALIC - exceeds PADEP Groundwater Non-Residential Vapor Intrusion Screening Values
NP = Product not present
ND ( ) = Parameter not detected above laboratory reporting limit.
ND ()*= Parameter not detected above laboratory reporting limit above RSHS
MTBE = methyl tert butyl ether.
Q = Qualifier
J = Estimated value
* = Well plug not secure. Casing was flooded
Vertical Datum: North American Vertical Datum of 1988 (NAVD88)
All samples analyzed by EPA Method 8260C.

Table 3 - PAGWIS Summary Table
2899 Holme Ave., Philadelphia, PA
Synergy Project #24-01483

PA Well ID	Well Address	Date Drilled	Latitude (DD)	Longitude (DD)	County	Municipality	Type Of Activity	Well Use	Water Use
510576	2901 Holme Ave	8/29/2013	40.05673	-75.02818	PHILADELPHIA	PHILADELPHIA	New Well	MONITORING	
523908	HOLME CIRCLE	3/19/2009	40.05668	-75.02863	PHILADELPHIA	PHILADELPHIA	New Well	MONITORING	OTHER
605728	HOLME CIRCLE	12/6/2002	40.05668	-75.02863	PHILADELPHIA	PHILADELPHIA	New Well	MONITORING	OTHER
30336		1/1/1923	40.05556	-75.02944	PHILADELPHIA	PHILADELPHIA		DESTROYED	UNUSED
510574	2901 Holme Ave	8/29/2013	40.0567	-75.02798	PHILADELPHIA	PHILADELPHIA	New Well	MONITORING	
510575	2901 Holme Ave	8/30/2013	40.05696	-75.02802	PHILADELPHIA	PHILADELPHIA	New Well	MONITORING	

FIGURES



Synergy Environmental Inc.
Environmental Consultants
155 Railroad Plaza, 1st Floor
Royersford, Pennsylvania 19468

Edited by:	Date:
R. Houck	May 2025
Project No.:	Scale:
24-01483	1:24,000

Figure 1 – Site Location Plan

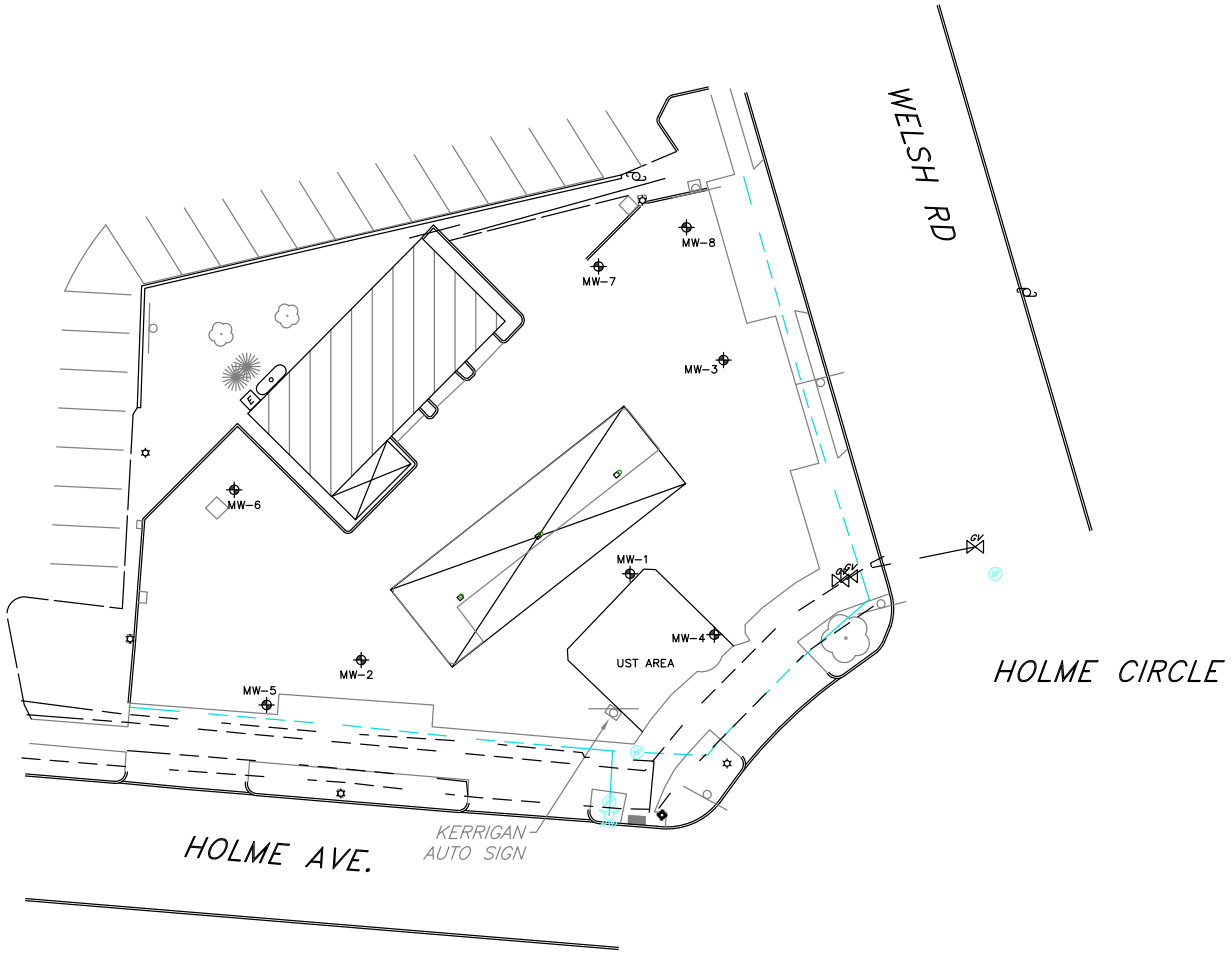
Gatz Automotive, Inc.

2899 Holme Ave.

Philadelphia, PA

N

USGS 7.5-minute Frankford, Pennsylvania Quadrangle Topographic Map, 2023.



LEGEND

Monitoring Well Location

Notes: – Site features and well locations obtained from survey performed by Bursich Associates, dated December 2024 and revised April 2025.

0 15 30
MAP SCALE

Synergy Environmental Inc.
Environmental Consultants
155 Railroad Plaza
First Floor
Royersford, PA 19468
P: 484-369-5000
F: 484-369-2000
W: www.synergyenvinc.com

FIGURE 2
Detailed Site Map
2899 Holme Avenue
Philadelphia, Pennsylvania

Drawn By:	Checked By:	Approved By:
EDF	RMH	RMH

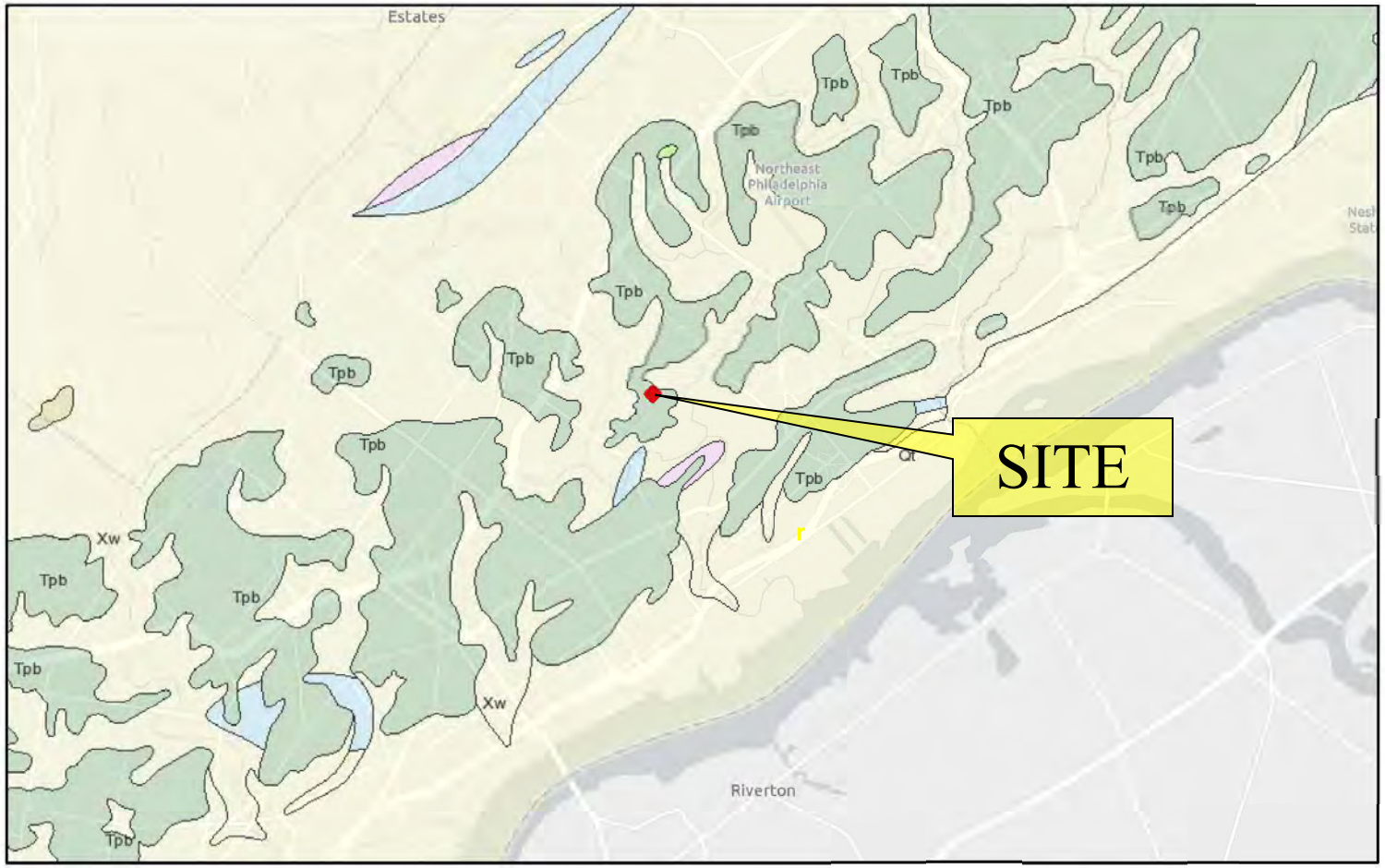
Scale:	Dwg No:	Sheet:	Date:
1" = 30'	SE Gatz	Site	4–11–25

Synergy Project No.: 24–01483

Rev. Desc.:

File Path: G:\PDrive NonLG (A–J)\Gatz Auto\J – Drawings Figures\Gatz – Fig 2 – Site Map.pdf

Gatz Auto



Synergy Environmental Inc.
Environmental Consultants
155 Railroad Plaza, 1st Floor
Royersford, Pennsylvania 19468

Project No.: 24-01483

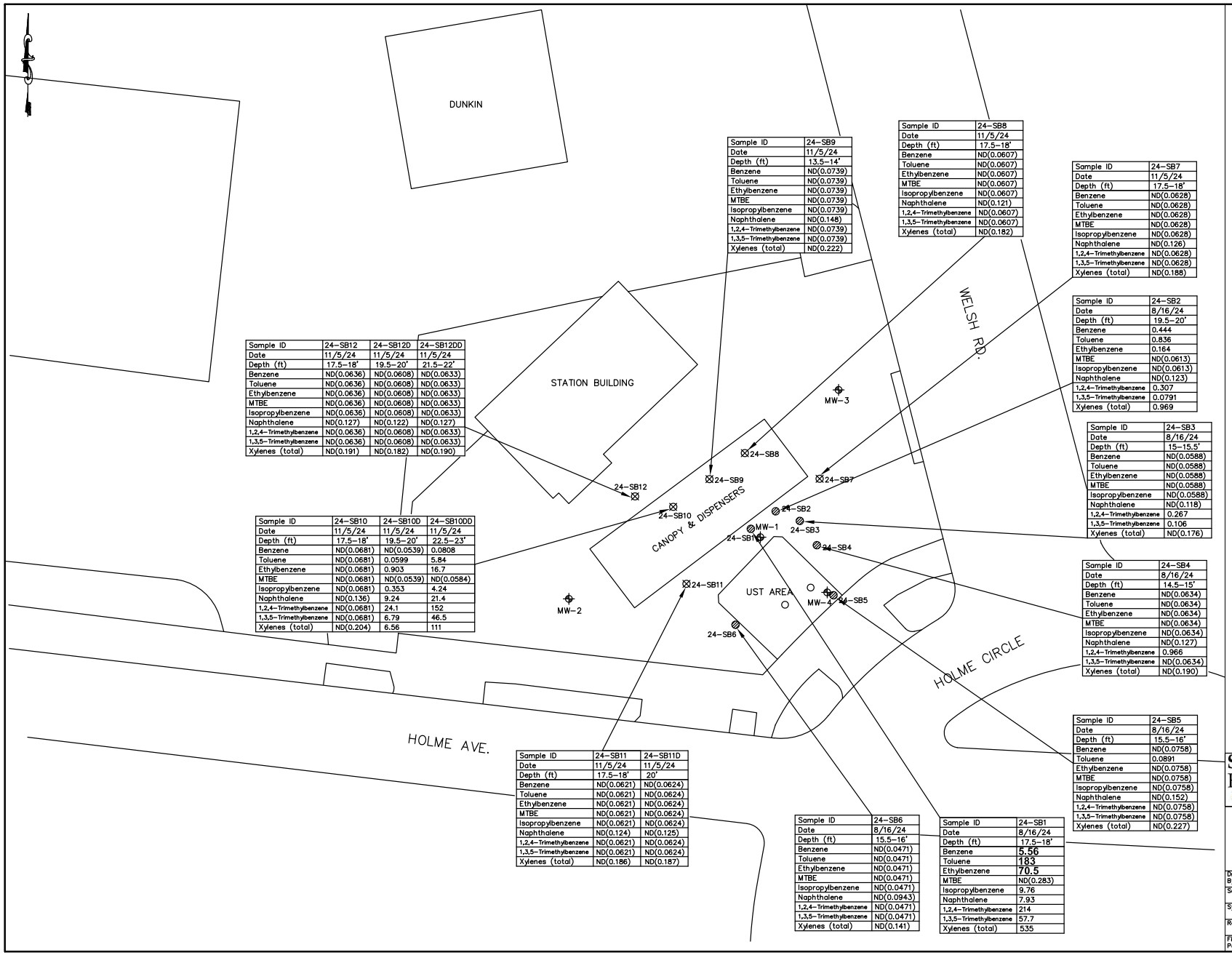
Scale: On Figure

Date: May 2025

Edited by: R. Houck

Figure 3 – Geologic Map

Gatz Auto
2899 Holme Avenue
Philadelphia, Philadelphia County, PA



Sample ID	24-SB12	24-SB12D	24-SB12DD
Date	11/5/24	11/5/24	11/5/24
Depth (ft)	17.5-18'	19.5-20'	21.5-22'
Benzene	ND(0.0636)	ND(0.0608)	ND(0.0633)
Toluene	ND(0.0636)	ND(0.0608)	ND(0.0633)
Ethylbenzene	ND(0.0636)	ND(0.0608)	ND(0.0633)
MTBE	ND(0.0636)	ND(0.0608)	ND(0.0633)
Isopropylbenzene	ND(0.0636)	ND(0.0608)	ND(0.0633)
Naphthalene	ND(0.127)	ND(0.122)	ND(0.127)
1,2,4-Trimethylbenzene	ND(0.0636)	ND(0.0608)	ND(0.0633)
1,3,5-Trimethylbenzene	ND(0.0636)	ND(0.0608)	ND(0.0633)
Xylenes (total)	ND(0.191)	ND(0.182)	ND(0.190)

Sample ID	24-SB10	24-SB10D	24-SB10DD
Date	11/5/24	11/5/24	11/5/24
Depth (ft)	17.5-18'	19.5-20'	22.5-23'
Benzene	ND(0.0681)	ND(0.0539)	0.0808
Toluene	ND(0.0681)	0.0599	5.84
Ethylbenzene	ND(0.0681)	0.903	16.7
MTBE	ND(0.0681)	ND(0.0539)	ND(0.0584)
Isopropylbenzene	ND(0.0681)	0.353	4.24
Naphthalene	ND(0.136)	9.24	21.4
1,2,4-Trimethylbenzene	ND(0.0681)	24.1	152
1,3,5-Trimethylbenzene	ND(0.0681)	6.79	46.5
Xylenes (total)	ND(0.204)	6.56	111

Sample ID	24-SB11	24-SB11D
Date	11/5/24	11/5/24
Depth (ft)	17.5-18'	20'
Benzene	ND(0.0621)	ND(0.0624)
Toluene	ND(0.0621)	ND(0.0624)
Ethylbenzene	ND(0.0621)	ND(0.0624)
MTBE	ND(0.0621)	ND(0.0624)
Isopropylbenzene	ND(0.0621)	ND(0.0624)
Naphthalene	ND(0.124)	ND(0.125)
1,2,4-Trimethylbenzene	ND(0.0621)	ND(0.0624)
1,3,5-Trimethylbenzene	ND(0.0621)	ND(0.0624)
Xylenes (total)	ND(0.186)	ND(0.187)

Sample ID	24-SB6
Date	8/16/24
Depth (ft)	15.5-16'
Benzene	ND(0.0471)
Toluene	ND(0.0471)
Ethylbenzene	ND(0.0471)
MTBE	ND(0.0471)
Isopropylbenzene	ND(0.0471)
Naphthalene	ND(0.0943)
1,2,4-Trimethylbenzene	ND(0.0471)
1,3,5-Trimethylbenzene	ND(0.0471)
Xylenes (total)	ND(0.141)

Sample ID	24-SB1
Date	8/16/24
Depth (ft)	17.5-18'
Benzene	5.56
Toluene	183
Ethylbenzene	70.5
MTBE	ND(0.283)
Isopropylbenzene	9.76
Naphthalene	7.93
1,2,4-Trimethylbenzene	214
1,3,5-Trimethylbenzene	57.7
Xylenes (total)	535

Sample ID	24-SB9
Date	11/5/24
Depth (ft)	13.5-14'
Benzene	ND(0.0739)
Toluene	ND(0.0739)
Ethylbenzene	ND(0.0739)
MTBE	ND(0.0739)
Isopropylbenzene	ND(0.0739)
Naphthalene	ND(0.148)
1,2,4-Trimethylbenzene	ND(0.0739)
1,3,5-Trimethylbenzene	ND(0.0739)
Xylenes (total)	ND(0.222)

Sample ID	24-SB8
Date	11/5/24
Depth (ft)	17.5-18'
Benzene	ND(0.0607)
Toluene	ND(0.0607)
Ethylbenzene	ND(0.0607)
MTBE	ND(0.0607)
Isopropylbenzene	ND(0.0607)
Naphthalene	ND(0.121)
1,2,4-Trimethylbenzene	ND(0.0607)
1,3,5-Trimethylbenzene	ND(0.0607)
Xylenes (total)	ND(0.182)

Sample ID	24-SB7
Date	11/5/24
Depth (ft)	17.5-18'
Benzene	ND(0.0628)
Toluene	ND(0.0628)
Ethylbenzene	ND(0.0628)
MTBE	ND(0.0628)
Isopropylbenzene	ND(0.0628)
Naphthalene	ND(0.126)
1,2,4-Trimethylbenzene	ND(0.0628)
1,3,5-Trimethylbenzene	ND(0.0628)
Xylenes (total)	ND(0.188)

Sample ID	24-SB2
Date	8/16/24
Depth (ft)	19.5-20'
Benzene	0.444
Toluene	0.836
Ethylbenzene	0.164
MTBE	ND(0.0613)
Isopropylbenzene	ND(0.0613)
Naphthalene	ND(0.123)
1,2,4-Trimethylbenzene	0.307
1,3,5-Trimethylbenzene	0.0791
Xylenes (total)	0.969

Sample ID	24-SB3
Date	8/16/24
Depth (ft)	15-15.5'
Benzene	ND(0.0588)
Toluene	ND(0.0588)
Ethylbenzene	ND(0.0588)
MTBE	ND(0.0588)
Isopropylbenzene	ND(0.0588)
Naphthalene	ND(0.118)
1,2,4-Trimethylbenzene	0.267
1,3,5-Trimethylbenzene	0.106
Xylenes (total)	ND(0.176)

Sample ID	24-SB4
Date	8/16/24
Depth (ft)	14.5-15'
Benzene	ND(0.0634)
Toluene	ND(0.0634)
Ethylbenzene	ND(0.0634)
MTBE	ND(0.0634)
Isopropylbenzene	ND(0.0634)
Naphthalene	ND(0.127)
1,2,4-Trimethylbenzene	0.966
1,3,5-Trimethylbenzene	ND(0.0634)
Xylenes (total)	ND(0.190)

Sample ID	24-SB5
Date	8/16/24
Depth (ft)	15.5-16'
Benzene	ND(0.0758)
Toluene	0.0891
Ethylbenzene	ND(0.0758)
MTBE	ND(0.0758)
Isopropylbenzene	ND(0.0758)
Naphthalene	ND(0.152)
1,2,4-Trimethylbenzene	ND(0.0758)
1,3,5-Trimethylbenzene	ND(0.0758)
Xylenes (total)	ND(0.227)

LEGEND

- Monitoring Well Location
- Soil Sample Location (8/16/24)
- Soil Sample Location (11/5/24)

PADEP ACT 2 NON-RESIDENTIAL STATEWIDE HEALTH STANDARD - DIRECT CONTACT (mg/kg)

Benzene	330
Toluene	10,000
Ethylbenzene	1,000
Xylenes (total)	9,100
MTBE	9,800
Isopropylbenzene	10,000
Naphthalene	77
1,2,4-Trimethylbenzene	5,400
1,3,5-Trimethylbenzene	5,400

PADEP ACT 2 NON-RESIDENTIAL STATEWIDE HEALTH STANDARD - SOIL TO GROUNDWATER - RESIDENTIAL USED AQUIFER (mg/kg)

Benzene	0.5
Toluene	100
Ethylbenzene	70
Xylenes (total)	1,000
MTBE	2
Isopropylbenzene	2,500
Naphthalene	25
1,2,4-Trimethylbenzene	300
1,3,5-Trimethylbenzene	93

Notes: -Site features and well locations obtained from "Figure 3 Site Plan", prepared by AECOM, dated September 2022
-Excavation corresponds to location of April 2023 soil samples SD-4/B-4

0 15 30
MAP SCALE

Synergy Environmental Inc.
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First Floor
Royersford, PA 19468
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W: www.synergyenvinc.com

FIGURE 4
August and November 2024 Soil Sampling Locations and Results
2899 Holme Avenue
Philadelphia, Pennsylvania

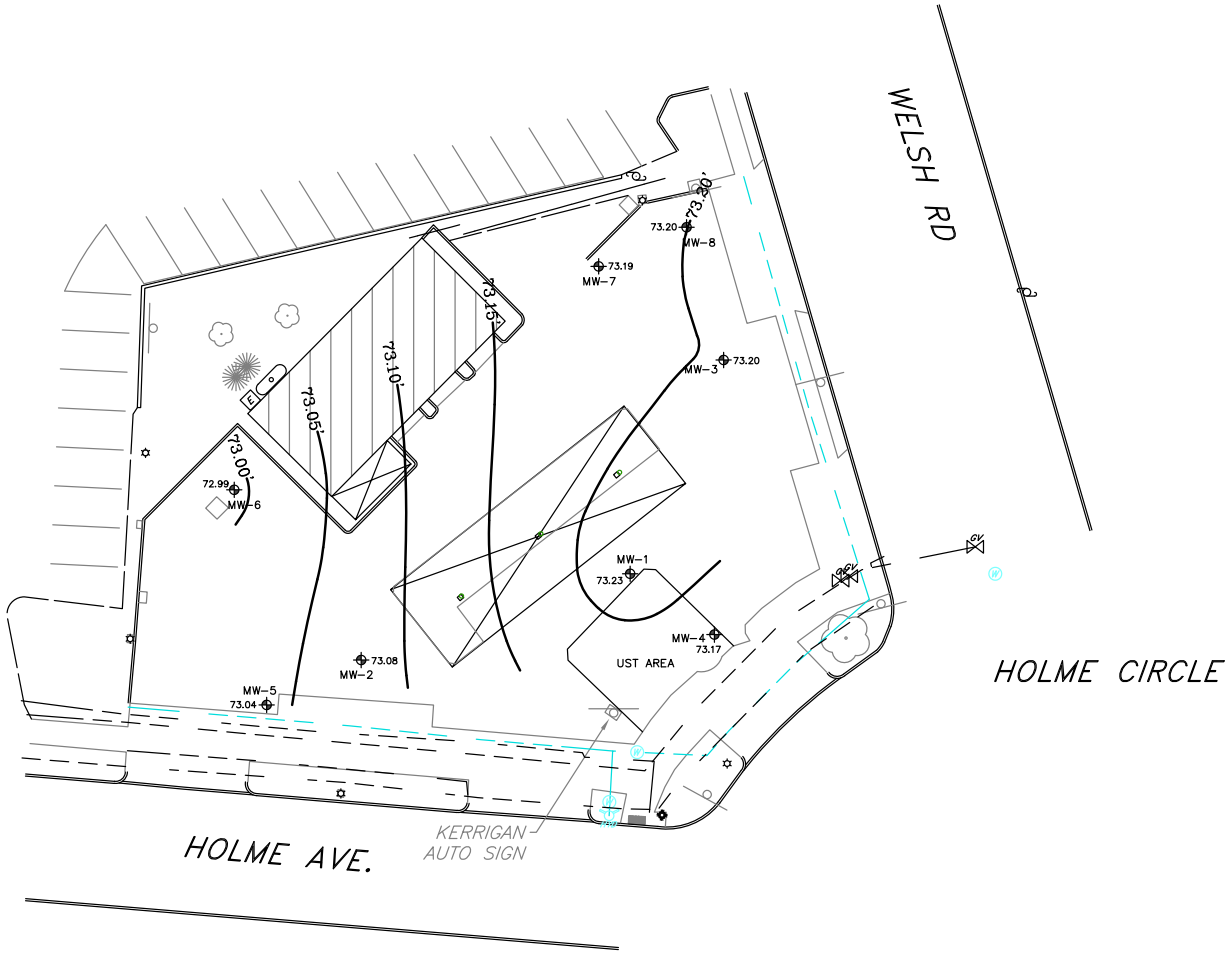
Drawn By:	Checked By:	Approved By:
EDF	RMH	RMH

Scale:	Dwg No:	Sheet:	Date:
1" = 30'	SE Gatz	Soil	5-29-25

Synergy Project No.: 24-01483

Rev. Desc.:

File Path: G:\PDrive NonLG (A-J)\Gatz Auto\J - Drawings Figures\Gatz - Fig 4 - Soil Results Aug-Nov 2024.pdf



LEGEND

⌖	MONITORING WELL
73.15'	GROUNDWATER CONTOUR LINE
73.08	GROUNDWATER ELEVATION (Based on NAVD 1988)
NS	NOT SAMPLED

Notes: – Site features and well locations obtained from survey performed by Bursich Associates, dated December 2024.

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MAP SCALE

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FIGURE 5
Groundwater Contour Map: 3-13-25
2899 Holme Avenue
Philadelphia, Pennsylvania

Drawn By: EDF	Checked By: RMH	Approved By: RMH	
Scale: 1" = 30'	Dwg No: SE Gatz	Sheet: gwC 3-13-25	Date: 4-11-25
Synergy Project No.: 24-01483			
Rev. Desc.:			
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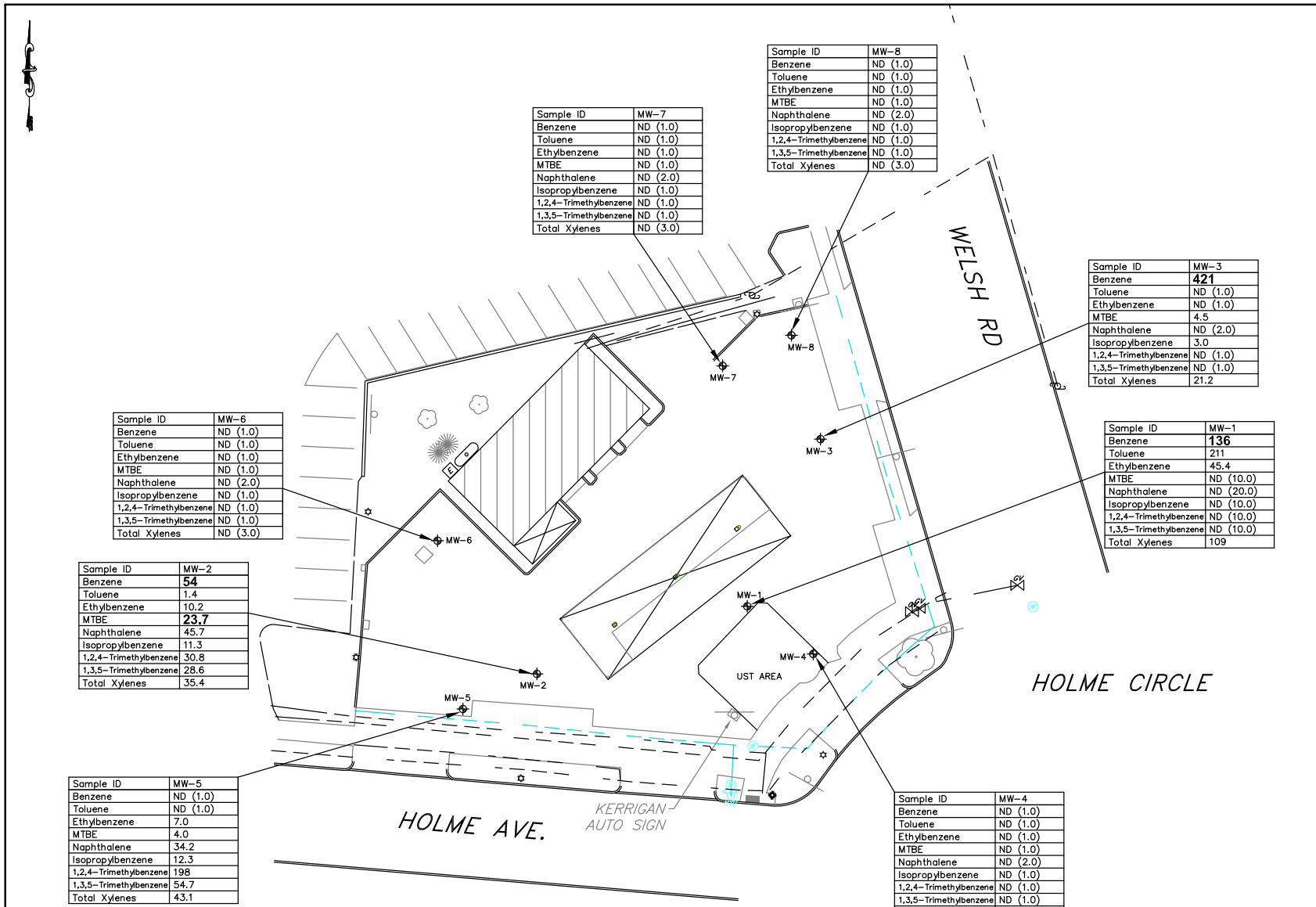

Sample ID	MW-7
Benzene	ND (1.0)
Toluene	ND (1.0)
Ethylbenzene	ND (1.0)
MTBE	ND (1.0)
Naphthalene	ND (2.0)
Isopropylbenzene	ND (1.0)
1,2,4-Trimethylbenzene	ND (1.0)
1,3,5-Trimethylbenzene	ND (1.0)
Total Xylenes	ND (3.0)

Sample ID	MW-8
Benzene	ND (1.0)
Toluene	ND (1.0)
Ethylbenzene	ND (1.0)
MTBE	ND (1.0)
Naphthalene	ND (2.0)
Isopropylbenzene	ND (1.0)
1,2,4-Trimethylbenzene	ND (1.0)
1,3,5-Trimethylbenzene	ND (1.0)
Total Xylenes	ND (3.0)

Sample ID	MW-3
Benzene	**421**
Toluene	ND (1.0)
Ethylbenzene	ND (1.0)
MTBE	4.5
Naphthalene	ND (2.0)
Isopropylbenzene	3.0
1,2,4-Trimethylbenzene	ND (1.0)
1,3,5-Trimethylbenzene	ND (1.0)
Total Xylenes	21.2

Sample ID	MW-6
Benzene	ND (1.0)
Toluene	ND (1.0)
Ethylbenzene	ND (1.0)
MTBE	ND (1.0)
Naphthalene	ND (2.0)
Isopropylbenzene	ND (1.0)
1,2,4-Trimethylbenzene	ND (1.0)
1,3,5-Trimethylbenzene	ND (1.0)
Total Xylenes	ND (3.0)

Sample ID	MW-1
Benzene	**136**
Toluene	211
Ethylbenzene	45.4
MTBE	ND (10.0)
Naphthalene	ND (20.0)
Isopropylbenzene	ND (10.0)
1,2,4-Trimethylbenzene	ND (10.0)
1,3,5-Trimethylbenzene	ND (10.0)
Total Xylenes	109

Sample ID	MW-2
Benzene	**54**
Toluene	1.4
Ethylbenzene	10.2
MTBE	**23.7**
Naphthalene	45.7
Isopropylbenzene	11.3
1,2,4-Trimethylbenzene	30.8
1,3,5-Trimethylbenzene	28.6
Total Xylenes	35.4

Sample ID	MW-5
Benzene	ND (1.0)
Toluene	ND (1.0)
Ethylbenzene	7.0
MTBE	4.0
Naphthalene	34.2
Isopropylbenzene	12.3
1,2,4-Trimethylbenzene	198
1,3,5-Trimethylbenzene	54.7
Total Xylenes	43.1

Sample ID	MW-4
Benzene	ND (1.0)
Toluene	ND (1.0)
Ethylbenzene	ND (1.0)
MTBE	ND (1.0)
Naphthalene	ND (2.0)
Isopropylbenzene	ND (1.0)
1,2,4-Trimethylbenzene	ND (1.0)
1,3,5-Trimethylbenzene	ND (1.0)
Total Xylenes	ND (3.0)

LEGEND

⌖	Monitoring Well Location
MTBE	Methyl Tert Butyl Ether
ND(1.0)	Not Detected At Or Above Detection Limit
NS	Well Not Sampled

PADEP ACT 2 RESIDENTIAL STATEWIDE HEALTH STANDARD – GROUNDWATER – NON-RESIDENTIAL USED AQUIFER (µg/L)

Benzene	5.0
Toluene	1,000
Ethylbenzene	700
Xylenes (total)	10,000
MTBE	20
Isopropylbenzene	840
Naphthalene	100
1,2,4-Trimethylbenzene	530
1,3,5-Trimethylbenzene	530

Notes:
- Site features and well locations obtained from survey performed by Bursich Associates, dated December 2024.
- All results reported in micrograms per liter
- **BOLD** values indicate exceedance of PADEP Act 2 statewide health standards

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MAP SCALE

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FIGURE 6
Groundwater Analytical Map: 3-13-25
2899 Holme Avenue
Philadelphia, Pennsylvania

Drawn By:	Checked By:	Approved By:
EDF	RMH	RMH

Scale:	Dwg No:	Sheet:	Date:
1" = 30'	SE Gatz	gwQ 3-13-25	4-11-25

Synergy Project No.: 24-01483

Rev. Desc.:

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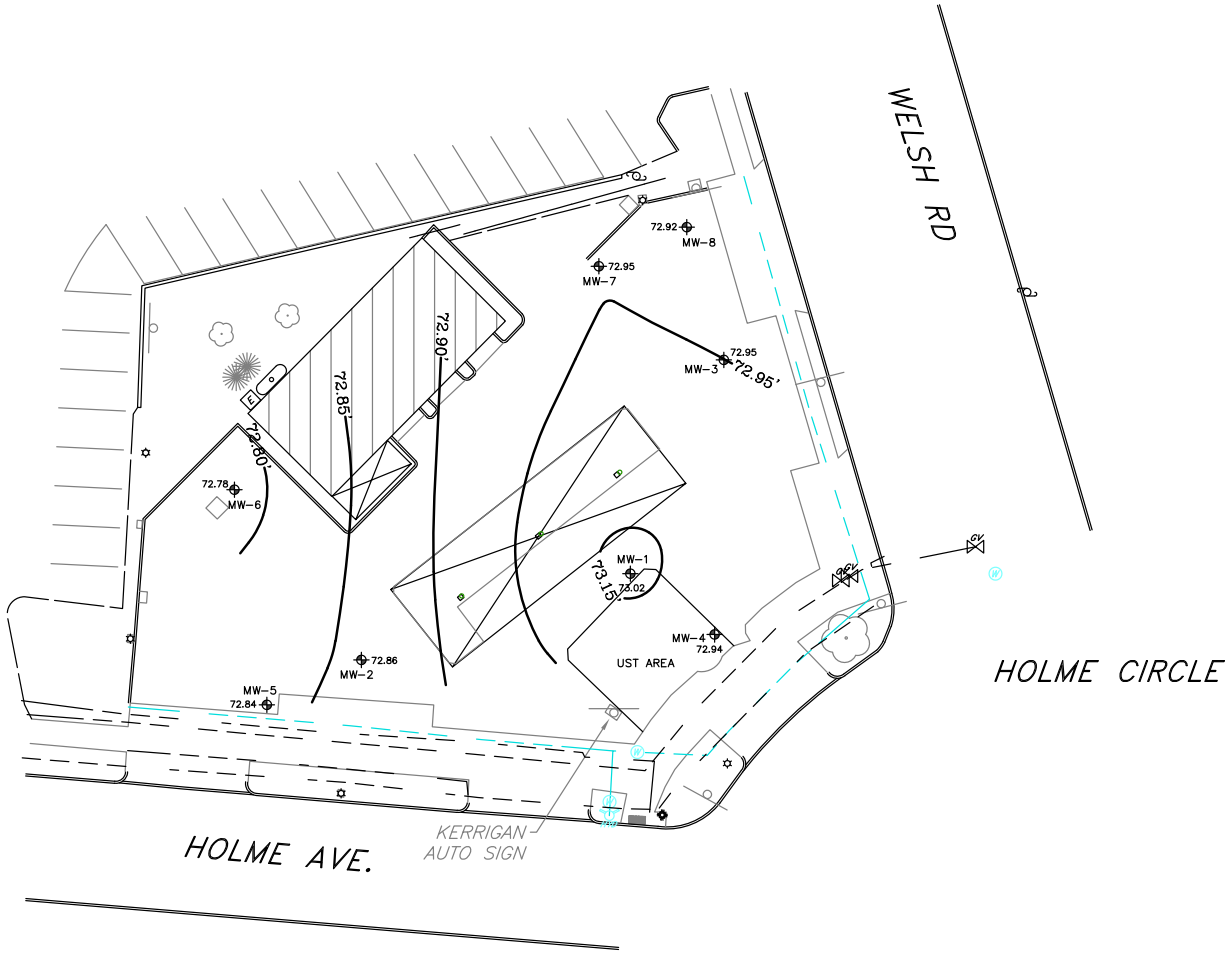

LEGEND

⌖	MONITORING WELL
72.85'	GROUNDWATER CONTOUR LINE
72.78	GROUNDWATER ELEVATION (Based on NAVD 1988)
NS	NOT SAMPLED

Notes: – Site features and well locations obtained from survey performed by Bursich Associates, dated December 2024.

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MAP SCALE

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Royersford, PA 19468
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F: 484-369-2000
W: www.synergyenvinc.com

FIGURE 7
Groundwater Contour Map: 4-9-25
2899 Holme Avenue
Philadelphia, Pennsylvania

Drawn By: EDF	Checked By: RMH	Approved By: RMH	
Scale: 1" = 30'	Dwg No: SE Gatz	Sheet: gwC 2qrt25	Date: 5-20-25
Synergy Project No.: 24-01483			
Rev. Desc.:			
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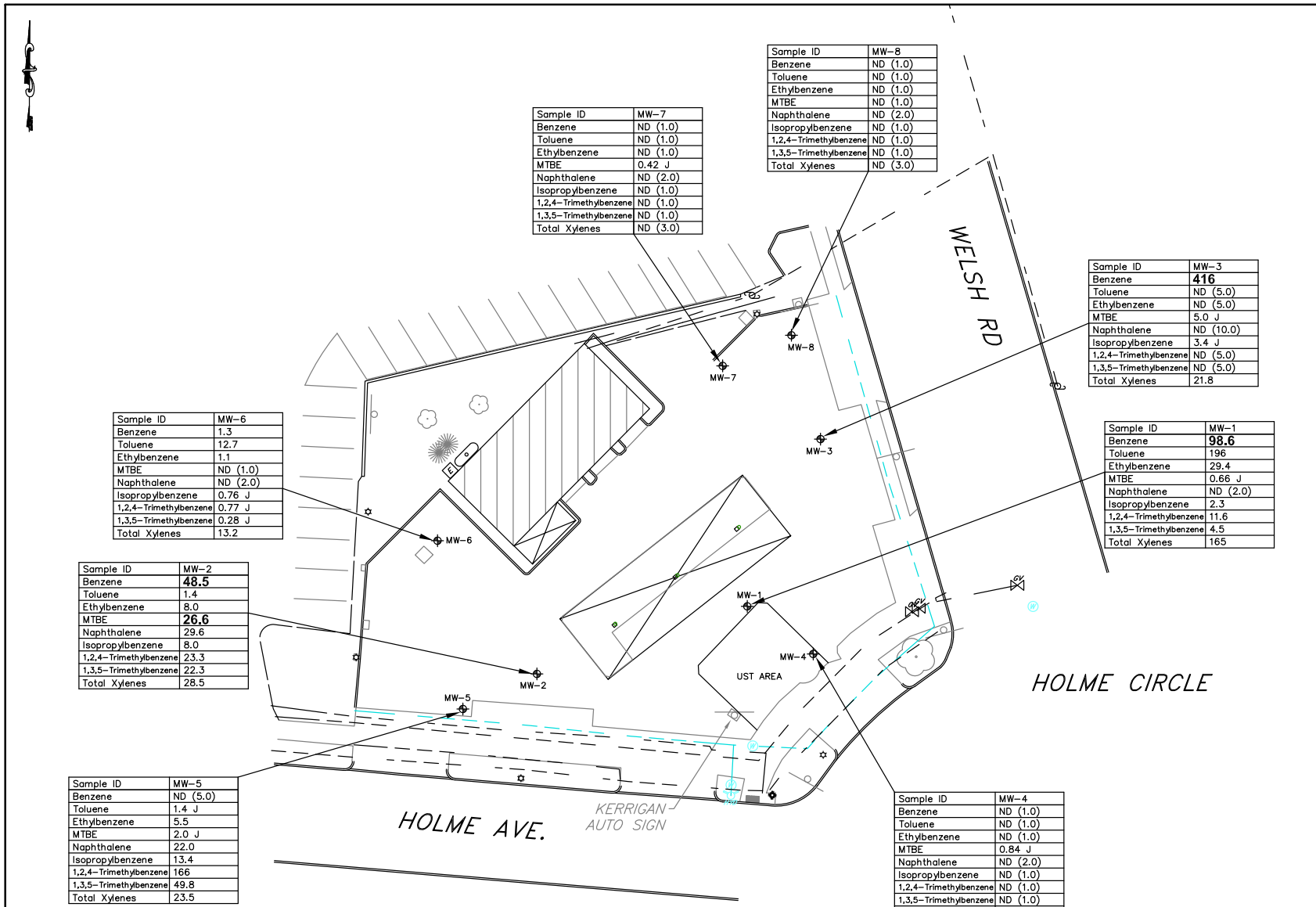

Sample ID	MW-8
Benzene	ND (1.0)
Toluene	ND (1.0)
Ethylbenzene	ND (1.0)
MTBE	ND (1.0)
Naphthalene	ND (2.0)
Isopropylbenzene	ND (1.0)
1,2,4-Trimethylbenzene	ND (1.0)
1,3,5-Trimethylbenzene	ND (1.0)
Total Xylenes	ND (3.0)

Sample ID	MW-7
Benzene	ND (1.0)
Toluene	ND (1.0)
Ethylbenzene	ND (1.0)
MTBE	0.42 J
Naphthalene	ND (2.0)
Isopropylbenzene	ND (1.0)
1,2,4-Trimethylbenzene	ND (1.0)
1,3,5-Trimethylbenzene	ND (1.0)
Total Xylenes	ND (3.0)

Sample ID	MW-3
Benzene	**416**
Toluene	ND (5.0)
Ethylbenzene	ND (5.0)
MTBE	5.0 J
Naphthalene	ND (10.0)
Isopropylbenzene	3.4 J
1,2,4-Trimethylbenzene	ND (5.0)
1,3,5-Trimethylbenzene	ND (5.0)
Total Xylenes	21.8

Sample ID	MW-6
Benzene	1.3
Toluene	12.7
Ethylbenzene	1.1
MTBE	ND (1.0)
Naphthalene	ND (2.0)
Isopropylbenzene	0.76 J
1,2,4-Trimethylbenzene	0.77 J
1,3,5-Trimethylbenzene	0.28 J
Total Xylenes	13.2

Sample ID	MW-1
Benzene	**98.6**
Toluene	196
Ethylbenzene	29.4
MTBE	0.66 J
Naphthalene	ND (2.0)
Isopropylbenzene	2.3
1,2,4-Trimethylbenzene	11.6
1,3,5-Trimethylbenzene	4.5
Total Xylenes	165

Sample ID	MW-2
Benzene	**48.5**
Toluene	1.4
Ethylbenzene	8.0
MTBE	**26.6**
Naphthalene	29.6
Isopropylbenzene	8.0
1,2,4-Trimethylbenzene	23.3
1,3,5-Trimethylbenzene	22.3
Total Xylenes	28.5

Sample ID	MW-5
Benzene	ND (5.0)
Toluene	1.4 J
Ethylbenzene	5.5
MTBE	2.0 J
Naphthalene	22.0
Isopropylbenzene	13.4
1,2,4-Trimethylbenzene	166
1,3,5-Trimethylbenzene	49.8
Total Xylenes	23.5

Sample ID	MW-4
Benzene	ND (1.0)
Toluene	ND (1.0)
Ethylbenzene	ND (1.0)
MTBE	0.84 J
Naphthalene	ND (2.0)
Isopropylbenzene	ND (1.0)
1,2,4-Trimethylbenzene	ND (1.0)
1,3,5-Trimethylbenzene	ND (1.0)
Total Xylenes	ND (3.0)

LEGEND

⊕	Monitoring Well Location
MTBE	Methyl Tert Butyl Ether
ND(1.0)	Not Detected At Or Above Detection Limit
NS	Well Not Sampled

PADEP ACT 2 RESIDENTIAL STATEWIDE HEALTH STANDARD – GROUNDWATER – NON-RESIDENTIAL USED AQUIFER (µg/L)

Benzene	5.0
Toluene	1,000
Ethylbenzene	700
Xylenes (total)	10,000
MTBE	20
Isopropylbenzene	840
Naphthalene	100
1,2,4-Trimethylbenzene	530
1,3,5-Trimethylbenzene	530

Notes: – Site features and well locations obtained from survey performed by Bursich Associates, dated December 2024.
– All results reported in micrograms per liter
– **BOLD** values indicate exceedance of PADEP Act 2 statewide health standards

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MAP SCALE

Synergy Environmental Inc.
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FIGURE 8
Groundwater Analytical Results Map: 4-9-25
2899 Holme Avenue
Philadelphia, Pennsylvania

Drawn By:	Checked By:	Approved By:
EDF	RMH	RMH

Scale:	Dwg No:	Sheet:	Date:
1" = 30'	SE Gatz	gwQ 2qrt25	5-20-25

Synergy Project No.: 24-01483

Rev. Desc.:

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APPENDIX A

Notification of Reportable Release

NOTIFICATION OF RELEASE *(Owners and Operators)*

FACILITY I.D. NUMBER 51 - 30277

☒ Initial
☐ Follow-Up

NOTIFICATION OF CONTAMINATION *(Certified Installers and Inspectors)*

INFORMATION FOR OWNERS AND OPERATORS (O/O)

The Storage Tank Program's Corrective Action Process (CAP) regulations establish requirements for owners and operators of storage tank systems and storage tank facilities to report confirmed releases and, in certain cases, suspected releases.

Suspected Release Reporting: Upon the completion of a suspected release investigation from which it could not be determined whether a release has occurred, the owner or operator must, within 15 days of the indication of the suspected release, complete and submit this form to the appropriate regional office of the Department (Subsection 245.304(c)(2)).

Confirmed Release Reporting: The owner or operator must notify the appropriate regional office of the Department by telephone as soon as practicable, but no later than 24 hours, after the confirmation of a release (Subsections 245.305(a) and (b)). Within 15 days of that telephone notification, the owner or operator must complete and submit this form to the appropriate regional office of the Department, to each municipality in which the release occurred, and to each municipality where that release has impacted environmental media or water supplies, buildings, or sewer or other utility lines (Subsections 245.305(c) and (e)). And if new impacts to environmental media or water supplies, buildings, or sewer or other utility lines are discovered after that initial written notification, the owner or operator must, within 15 days of the discovery of the new impact, complete and submit this form to the Department and to each impacted municipality (Subsections 245.305(d) and (e)).

INFORMATION FOR CERTIFIED INSTALLERS AND INSPECTORS (I/I)

In accordance with the Storage Tank Program's certification regulations, certified installers and inspectors must complete and submit this form to the Department within 48 hours of observing any of the following while performing services as a certified installer or inspector: a release of a regulated substance; suspected or confirmed contamination of soil, surface or groundwater from regulated substances; or a regulated substance in a containment structure or facility (Subsections 245.132(a)(4) and 245.132(a)(6)).

INSTRUCTIONS

Record the storage tank facility I.D. number at the top right-hand corner of each page of this form.

Owners and Operators (O/O): Indicate if this is an initial or follow-up notification by marking the appropriate box found in the top right-hand corner of this page.

- To report a Suspected Release, complete all information in Sections I, II, IIIA, IIIC, VI, VIII and IX.
- To report a Confirmed Release, complete all information in Sections I, II, IIIA, IIIB, IIIC, IV, V, VIII and IX.

Certified Installers and Inspectors (I/I): Complete all information in Sections I, II, IIIA, IIIC, VI or VII, VIII, and IX. Attach a copy of the failed, valid tightness test results, if applicable.

PLEASE SEND COMPLETED ORIGINAL FORM TO:

PA Department of Environmental Protection
Environmental Cleanup and Brownfields Program
Storage Tank Section
(and the appropriate address below, depending on where the FACILITY is located)

Northwest Region	North-central Region	Northeast Region
230 Chestnut Street Meadville, PA 16335-3481 PHONE: 814-332-6945 / 800-373-3398 FAX: 814-332-6121	208 W. Third Street, Suite 101 Williamsport, PA 17701 PHONE: 570-327-3636 FAX: 570-327-3420	2 Public Square Wilkes-Barre, PA 18701-1915 PHONE: 570-826-2511 FAX: 570-820-4907
Counties: Armstrong, Butler, Clarion, Crawford, Elk, Erie, Forest, Indiana, Jefferson, Lawrence, McKean, Mercer, Venango, Warren	**Counties:** Bradford, Cameron, Centre, Clearfield, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga, Union	**Counties:** Carbon, Lackawanna, Lehigh Luzerne, Monroe, Northampton, Pike Schuylkill, Susquehanna, Wayne, Wyoming
Southwest Region	**South-central Region**	**Southeast Region**
400 Waterfront Drive Pittsburgh, PA 15222 PHONE: 412-442-4000 FAX: 412-442-4194	909 Elmerton Avenue Harrisburg, PA 17110 PHONE: 717-705-4705 / 800-541-2050 FAX: 717-705-4830	2 East Main Street Norristown, PA 19401 PHONE: 484-250-5900 FAX: 484-250-5961
Counties: Allegheny, Beaver, Cambria, Fayette, Greene, Somerset, Washington, Westmoreland	**Counties:** Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry, York	**Counties:** Bucks, Chester, Delaware, Montgomery, Philadelphia

I. FACILITY INFORMATION (Both O/O and I/I)

Facility Name: GATZ AUTO
Facility I.D. Number: 51-30277
Street Address (P.O. Box not acceptable): 2899 HOLME AVENUE
City: PHILADELPHIA
State: PA
Zip Code: 19152 -
County: PHILADELPHIA
Municipality: PHILADELPHIA
Contact Person: JAMES KERRIGAN
Telephone Number: (267) 994 - 4466

II. OWNER/OPERATOR INFORMATION (Both O/O and I/I)

Owner Name: GATZ AUTO, INC.
Address: 2899 HOLME AVENUE
City: PHILADELPHIA
State: PA
Zip Code: 19152 -
Telephone Number: (267) 994 - 4466
Operator Name: JAMES KERRIGAN
Telephone Number: (267) 994 - 4466

III. REGULATED SUBSTANCE INFORMATION

A. Type of Product(s) Involved (Mark All That Apply ☒): Both O/O and I/I		B. Quantity (Gallons) of Product(s) Released: O/O Only	C. Contamination Suspected [S] or Confirmed [C] (Mark All That Apply ☒): Both O/O and I/I	
Leaded Gasoline	☐		☐ [S]	☐ [C]
Unleaded Gasoline	☒	UNKNOWN	☐ [S]	☒ [C]
Aviation Gasoline	☐		☐ [S]	☐ [C]
Kerosene	☐		☐ [S]	☐ [C]
Jet Fuel	☐		☐ [S]	☐ [C]
Diesel Fuel	☐		☐ [S]	☐ [C]
New Motor Oil	☐		☐ [S]	☐ [C]
Used Motor Oil	☐		☐ [S]	☐ [C]
Fuel Oil No. 1	☐		☐ [S]	☐ [C]
Fuel Oil No. 2	☐		☐ [S]	☐ [C]
Fuel Oil No. 4	☐		☐ [S]	☐ [C]
Fuel Oil No. 5	☐		☐ [S]	☐ [C]
Fuel Oil No. 6	☐		☐ [S]	☐ [C]
Other (Specify) _____	☐		☐ [S]	☐ [C]
Unknown	☐		☐ [S]	☐ [C]

IV. CONFIRMED RELEASE INFORMATION (O/O Only)

Date Release was Confirmed: 01 (m) / 25 (d) / 2024 (y)

Date Owner/Operator Verbally Notified Appropriate Regional Office of Confirmed Release and Office Notified:
Date: 01 (m) / 25 (d) / 2024 (y) Office: SOUTHEAST REGION

Date Owner/Operator Sent Copy of this Written Notification to Local Municipality(ies) and Name of Municipality(ies) Notified:
Date: 01 (m) / 26 (d) / 2024 (y) Municipality: PHILADELPHIA
Date: ___ (m) / ___ (d) / ___ (y) Municipality: _____

Source (Mark All That Apply ☒):

- Tank (DEP Assigned Nos. 003) ☐
- Piping System (Aboveground Regulated) ☐
- Piping System (Underground Regulated) ☐
- Piping System (Non-Regulated) ☐
- Dispenser/Dispensing Equipment ☐
- Spill Prevention Equipment ☐
- Submersible Turbine Pump Head/Fittings ☐
- Containment/Sump Failure ☐
- Other (Specify) CRACK IN FG TANK ☒
- Unknown ☐

Cause (Mark All That Apply ☒):

- Faulty Installation ☐
- Corrosion ☐
- Physical/Mechanical Failure ☒
- Spill During Delivery ☐
- Overfill at Delivery ☐
- Vehicle Gas Tank Overfill ☐
- Product Delivery Hose Rupture ☐
- Accident/Natural Disaster ☐
- Other (Specify) _____ ☐
- Unknown ☐

How Discovered (Mark All That Apply ☒):

- During Closure ☒
- Lining Installation ☐
- Routine Leak Detection ☐
- Third Party Inspection ☐
- Tightness Testing Activities ☐
- Visible Product or Odor Reports ☐
- Water in Tank ☐
- Construction ☐
- Upgrade/Repair ☐
- Supply Well Sample Results ☐
- Monitoring Well Sample Results ☐
- Property Transfer ☐
- Other (Specify) _____ ☐
- Unknown ☐

Environmental Media Affected and Impacts (Mark All That Apply ☒):

- Soil ☒
- Sediment ☐
- Surface Water ☐
- Ground Water ☐
- Bedrock ☐
- Water Supplies ☐
- Vapors/Product in Buildings ☐
- Vapors/Product in Sewer/Utility Lines ☐
- Ecological Receptors ☐

V. INTERIM REMEDIAL ACTIONS (O/O Only)

Indicate the Interim Remedial Actions Planned, Initiated or Completed (Mark All That Apply ☒):

	Planned	Initiated	Completed	Not Applicable
Regulated Substance Removed from Storage Tanks	☐	☐	☒	☐
Fire, Explosion and Safety Hazards Mitigated	☐	☐	☐	☒
Contaminated Soil Excavated	☐	☒	☐	☐
Free Product Recovered	☐	☐	☐	☒
Water Supplies Identified and Sampled	☐	☐	☐	☒
Temporary Water Supplies Provided	☐	☐	☐	☒
Other (Specify) _____	☐	☐	☐	☐

VI. SUSPECTED RELEASE / CONTAMINATION INFORMATION (Both O/O and I/I)

Date the Indication of a Suspected Release / Contamination was Observed: ___ / ___ / _____ (m / d / y)

Indication of Suspected Release / Contamination (Mark All That Apply ☒):

- ☐ Unusual Level of Vapors
- ☐ Erratic Behavior of Product Dispensing Equipment
- ☐ Release Detection Results Indicate a Release
- ☐ Discovery of Holes in the Storage Tank
- ☐ Containment Sump Test Failure
- ☐ Spill Prevention Equipment Test Failure
- ☐ Other (Specify) _____

VII. CONFIRMED CONTAMINATION INFORMATION (I/I Only)

Date the Confirmed Contamination was Observed: 01 / 25 / 2024 (m / d / y)

Extent of Confirmed Contamination (Mark All That Apply ☒):

- ☒ Product Stained or Product Saturated Soil or Backfill
- ☐ Ponded Product
- ☐ Free Product or Sheen on Ponded Water
- ☐ Free Product or Sheen on the Ground Water Surface
- ☐ Free Product or Sheen on Surface Water
- ☐ Other (Specify) CRACK IN TANK

VIII. ADDITIONAL INFORMATION (Both O/O and I/I)

Provide any additional, relevant, available information concerning the release or contamination. If reporting a confirmed release, include specific details about the source and cause of the release, the affected environmental media, and any impacts to water supplies, buildings, or sewer or other utility lines. Owners or Operators reporting a suspected release should describe what procedures were followed to investigate the indication(s) of the suspected release noted in Section VI. Provide both DEP-assigned and owner/operator-assigned tank number(s), where applicable. Use additional 8½" x 11" sheets of paper, if necessary.

DURING THE REMOVAL FOR PERMANENT CLOSURE OF UST 003, A CIRCUMFERENTIAL CRACK WAS IDENTIFIED ALONG THE BOTTOM OF THE NORTH END OF THE SINGLE-WALL FIBERGLASS TANK. OBVIOUS GASOLINE-IMPACTED SOIL WAS ALSO OBSERVED (PID FIELD-SCREENING) BENEATH THE NORTH END OF UST 003. NO IMPACTS TO WATER SUPPLIES, BUILDINGS OR UNDERGROUND UTILITIES WERE IDENTIFIED DURING THE CLOSURE ASSESSMENT.

IX. CERTIFICATION (Both O/O and I/I)

OWNER OR OPERATOR CERTIFICATION

I, JAMES KERRIGAN, hereby certify, under penalty of law as provided in 18 Pa.
(Print Name)

C.S.A. §4904 (relating to unsworn falsification to authorities) that I am the owner or operator of the above referenced storage tank facility and that the information provided by me in this notification is true, accurate and complete to the best of my knowledge and belief.

James P Kerrigan
Signature of Owner or Operator

1/26/24
Date

CERTIFIED INSTALLER CERTIFICATION

I, Timothy Fischer, hereby certify, under penalty of law as provided in 18 Pa.
(Print Name)

C.S.A. §4904 (relating to unsworn falsification to authorities) that I am the certified installer who performed tank handling activities at the above referenced storage tank facility and that the information provided by me in this notification is true, accurate and complete to the best of my knowledge and belief.

Timothy Fischer
Signature of Certified Installer

1/26/2024
Date

5197
Installer Certification Number

249
Company Certification Number

CERTIFIED INSPECTOR CERTIFICATION

I, _____, hereby certify, under penalty of law as provided in 18 Pa.
(Print Name)

C.S.A. §4904 (relating to unsworn falsification to authorities) that I am the certified inspector who performed inspection activities at the above referenced storage tank facility and that the information provided by me in this notification is true, accurate and complete to the best of my knowledge and belief.

_____
Signature of Certified Inspector

/ /
Date

_____
Inspector Certification Number

_____
Company Certification Number

APPENDIX B

UST Closure Report

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL CLEANUP AND BROWNFIELDS

UNDERGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

51-30277
Facility I.D.

GATZ AUTO
Facility Name

PHILADELPHIA	PHILADELPHIA
Municipality	County

March 19, 2024
Date Prepared

GILBERT J. MARSHALL, PG
Name of Person Submitting Report
(Please Print)

MARSHALL GEOSCIENCE, INC.
Company Name
(If Applicable)

PRINCIPAL GEOLOGIST
Title

Closure Method (Check all that apply):

- [X] UST Removal
- [ ] UST Closure-In-Place
- [ ] UST Change-In-Service

Site Assessment Results (Check all that apply):

- [ ] No Obvious Contamination - Sample Results Meet Standards/Levels
- [ ] No Obvious Contamination - Sample Results Do Not Meet Standards/Levels
- [ ] Obvious, Localized Contamination - Sample Results Meet Standards/Levels
- [X] Obvious, Localized Contamination - Sample Results Do Not Meet Standards/Levels
- [ ] Obvious, Extensive Contamination

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL CLEANUP AND BROWNFIELDS

DATE RECEIVED: _____

UNDERGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

Owners who are permanently closing underground storage tank systems may use this form to demonstrate that a storage tank system closure was performed in accordance with technical guidance document 263-4500-601 "Closure Requirements for Underground Storage Tank Systems". PLEASE PRINT OR TYPE. COMPLETE ALL QUESTIONS.

SECTION I. Owner/Facility/Tank/Waste Management and Disposal Information

1. Facility ID Number 51-30277
2. Facility Name GATZ AUTO
3. Facility County PHILADELPHIA
4. Facility Municipality PHILADELPHIA
5. Facility Address 2899 HOLME AVENUE, PHILADELPHIA, PA 19152
6. Facility Contact Person JAMES KERRIGAN
7. Facility Telephone Number (267) 994-4466
8. Owner Name GATZ AUTO, INC.
9. Owner Mailing Address 2899 HOLME AVENUE, PHILADELPHIA, PA 19152
10. Description of Underground Storage Tank Systems (Complete for each tank system closed)

DATE OF TANK SYSTEM CLOSURE (Month/Day/Year)		1 - 26 - 2024	1 - 26 - 2024	1 - 25 - 2024	- -
Description of Underground Storage Tank System (Complete for each tank system undergoing closure)					
DEP Tank ID Number		001	002	003	
Total Capacity (Gallons)		8,000	8,000	8,000	
Substance(s) Stored Throughout Operating Life of Tank System (Check All That Apply)	**a. Petroleum**				
	Unleaded Gasoline	☒	☒	☒	☐
	Leaded Gasoline	☐	☐	☐	☐
	Aviation Gasoline	☐	☐	☐	☐
	Pure Ethanol	☐	☐	☐	☐
	Blended Ethanol _____%	☐	☐	☐	☐
	Kerosene	☐	☐	☐	☐
	Jet Fuel	☐	☐	☐	☐
	Diesel Fuel	☐	☐	☐	☐
	Biodiesel _____%	☐	☐	☐	☐
	Fuel Oil No. 1	☐	☐	☐	☐
	Fuel Oil No. 2	☐	☐	☐	☐
	Fuel Oil No. 4	☐	☐	☐	☐
	Fuel Oil No. 5	☐	☐	☐	☐
	Fuel Oil No. 6	☐	☐	☐	☐
	New Motor Oil	☐	☐	☐	☐
	Used Motor Oil	☐	☐	☐	☐
	Nonpetroleum Oil, Specify				
	Other, Specify				
NOTE: If Hazardous Substance Block is Checked, Attach Safety Data Sheets (SDS)	**b. Hazardous Substance**	☐	☐	☐	☐
	Name of Principal CERCLA Substance AND Chemical Abstract Service (CAS) No.				
	c. Unknown	☐	☐	☐	☐

CLOSURE METHOD(s):	DEP Tank ID Number:	001	002	003	
Partial Storage Tank System Closure		☐	☐	☐	☐
Tank ☐ N/A	a. Removal	☒	☒	☒	☐
	b. Closure-in-Place	☐	☐	☐	☐
	c. Change-in-Service	☐	☐	☐	☐
Piping ☐ N/A	a. Removal	☒	☒	☒	☐
	b. Closure-in-Place	☐	☐	☐	☐
	c. Change-in-Service	☐	☐	☐	☐
Dispenser ☐ N/A	a. Removal	☒	☒	☒	☐
	b. Closure-in-Place	☐	☐	☐	☐
	c. Change-in-Service	☐	☐	☐	☐
Other _____	a. Removal	☐	☐	☐	☐
	b. Closure-in-Place	☐	☐	☐	☐
	c. Change-in-Service	☐	☐	☐	☐

Describe Closure Activities:

FERGUSON & McCANN, INC. DECOMMISSIONED, CLEANED AND REMOVED UST SYSTEMS 001, 002 AND 003 INCLUDING THE TANKS, PUMPS, PIPING AND APPURTENANT EQUIPMENT. MARSHALL GEOSCIENCE, INC. PERFORMED THE CLOSURE ASSESSMENT DURING THE REMOVAL OF UST SYSTEMS 001, 002 AND 003 FOR PERMANENT CLOSURE.

Yes N/A

11. Briefly describe the storage tank facility and the nature of the operations which were conducted at the facility (both historical and present) **including use of the storage tank systems:**

THE REGULATED GASOLINE UST SYSTEMS WERE FORMERLY USED TO STORE AND DISPENSE FUEL FOR RETAIL SALE BY GATZ AUTO.

☒ ☐ 12. A site location and sampling map of the site, drawn to scale, is attached. ~~See page 11 of 11~~
SEE FIGURES 1 THROUGH 3.

☒ ☐ 13. Original, color photographs of the closure process are attached (i.e., inside of excavation/piping runs, pit water, tanks showing condition).
SEE PHOTOGRAPHS ATTACHMENT.

☒ ☐ 14. An amended "Storage Tanks Registration/Permitting Application" Form was submitted to the DEP, Bureau of Environmental Cleanup and Brownfields, Division of Storage Tanks, P.O. Box 8762, Harrisburg, PA 17105-8762.
Date: 01/ 29 / 2024

☒ ☐ 15. If a release was confirmed, the appropriate regional office of DEP was notified by the owner or operator.
Date: 01 / 25 / 2024 Office: SOUTHEAST REGION

Yes N/A

☒ ☐ 16. If tanks were cleaned on-site:

a. Briefly describe the disposition of usable product: USABLE PRODUCT WAS DISPENSED TO THE MAXIMUM EXTENT POSSIBLE.

b. Briefly describe the disposal of unusable product, sludges, sediments, and wastewater generated during cleaning. Provide the name and permit number of the processing, treatment, storage or disposal facility. (Attach documentation of proper disposal):
WASTEWATER GENERATED DURING TANK CLEANING (750 Gallons) WAS REMOVED, TRANSPORTED AND PROPERLY DISPOSED USING A VACUUM TRUCK BY MILLER ENVIRONMENTAL GROUP (SEE ATTACHMENT 1).

c. If tank contents were determined/deemed to be hazardous waste, provide:

(1) Generator ID Number:

(2) Licensed Hazardous Waste Transporter Name and ID Number:

☐ ☒ 17. If tanks were removed from the site for cleaning:

a. Provide the name and permit number of the processing, treatment, storage or disposal facility performing the tank cleaning:

b. If tank contents were determined/deemed to be hazardous waste, provide:

(1) Generator ID Number:

(2) Licensed Hazardous Waste Transporter Name and ID Number:

18. Briefly describe the disposition of tanks/piping (Attach documentation of proper disposal):
THE UST SYSTEM TANKS, PIPING AND APPURTENANT EQUIPMENT WERE PROPERLY DISPOSED AT DELAWARE COUNTY SOLID WASTE AUTHORITY (SEE ATTACHMENT 2).

☒ ☐ 19. If contaminated soil is excavated:

a. Briefly describe the disposition and amount 57.19 (tons) of contaminated soil. Provide the name and permit number of the processing, treatment, storage or disposal facility. (Attach documentation of proper disposal):
A TOTAL OF 57.19 TONS OF GASOLINE-IMPACTED SOILS WAS PROPERLY TRANSPORTED AND RECYCLED AT SOIL SAFE, INC.'S LOGAN, NEW JERSEY FACILITY (SEE ATTACHMENT 3).

b. If contaminated soil is determined/deemed to be hazardous waste, provide:

(1) Generator ID Number:

(2) Licensed Hazardous Waste Transporter Name and ID Number:

Yes	N/A		
☒	☐	20.	Briefly describe the disposition of and amount ~480 (tons) of uncontaminated soil and debris (attach analyses): CONCRETE WAS MANAGED OFFSITE BY BLUE MOUNTAIN MULCH (6 LOADS) AND GILL QUARRIES (1 LOAD) (SEE ATTACHMENT 4). NO EVIDENCE OF CONTAMINATION WAS OBSERVED IN THE EXCAVATED MATERIALS BASED ON PHYSICAL OBSERVATIONS, PID FIELD-SCREENING AND LABORATORY ANALYSES (SEE BF-1 IN TABLE 1 AND ATTACHMENT 5).
☐	☒	21.	If the tanks were "Closed-in-Place" provide information below.

a. Briefly describe the tank cleaning process. _____

b. Describe the inert, non-shrinking material placed into the tanks: _____

I, JAMES KERRIGAN (Print Name), hereby certify, under penalty of law as provided in 18 Pa. C.S. §4904 (relating to unsworn falsification to authorities) that I am the owner of the above referenced storage tank system(s) and that the information provided by me in this closure report (Section I) is true, accurate and complete to the best of my knowledge and belief.

James A Kerrigan
Signature of Tank Owner

3/22/24
Date

GATZ AUTO, INC.
Company Name
(If applicable)

PRESIDENT
Title

UNDERGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

SECTION II. Tank Handling Information

Facility ID Number 51 - 30277
DEP Tank ID Number(s) 001, 002 and 003

Yes N/A

1. Briefly describe the excavation and initial on-site staging of uncontaminated/contaminated soil and debris:

   UNCONTAMINATED SOIL WAS STAGED ON-SITE PRIOR TO REUSE TO PARTIALLY BACKFILL THE TANK EXCAVATION. CONTAMINATED SOIL WAS ENVELOPED WITH PLASTIC SHHETING AND STAGE ON THE STATION'S PAVED LOT PRIOR TO MANAGEMENT OFFSITE.

2. Briefly describe the method of piping system closure and the closure of the piping systems, including the quantity and condition of the piping:

   ALL PIPING WAS IN GOOD CONDITION AND REMOVED FOR PERMANENT CLOSURE.

3. Briefly describe the condition of the tanks and any problems encountered during tank handling or tank removal activities:

   UST 001: GOOD CONDITION. UST 002: CIRCUMFERENTIAL CRACK AT NORTH END OF TANK, BUT NO EVIDENCE OF A RELEASE. UST 003: CIRCUMFERENTIAL CRACK AT NORTH END OF TANK WITH EVIDENCE OF RELEASE (PADEP NOTIFIED).

4. Briefly describe the method used to purge the tanks of and monitor for hazardous or explosive vapors:

   PURGED TANKS WITH AIR EXCHANGER AND CHECKED TANK ATMOSHERE WITH LEL METER.

☒ ☐ 5. If tanks were cleaned on-site:

   a. Briefly describe the tank cleaning process:
   TANKS WERE TRIPLE-RINSED WITH CLEAN WATER. WASTEWATER WAS REMOVED AND PROPERLY DISPOSED USING A VACUUM TRUCK.

   b. If subcontracted, name and address of company that performed the tank cleaning:

☐ ☒ 6. If tanks were “Closed-in-Place”, briefly describe the tank fill material:

☒ ☐ 7. If contamination was suspected or observed, the “Notification of Contamination” form was submitted.

I, TIMOTHY FISCHER, hereby certify, under penalty of law as provided in 18 Pa. C.S. §4904 (relating to unsworn falsification to authorities) that I am the certified remover who performed the tank handling activities associated with the closure of the above referenced storage tank system(s) and that the information provided by me in this closure report (Section I) is true, accurate and complete to the best of my knowledge and belief.

(Print Name)

Timothy Fischer
Signature of Certified Remover

1 12/6/2024
Date

5197
Remover Certification Number

249
Company Certification Number

FERGUSON & McCANN, INC.
Company Name

270 BODLEY ROAD
Street

ASTON, PA 19014
City/Town, State, Zip

(610) 459-7727
Phone

UNDERGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

SECTION III. Site Assessment Information

Tank Registration # 001 (complete one sheet for EACH tank system and attach ALL laboratory sheets pertaining to that system)

Facility ID Number 51 - 30277

A. Provide depth of *BEDROCK* and *WATER* IF encountered during excavation or soil boring (write "N/A": if NOT encountered).

Bedrock N/A feet below land surface Water N/A feet below land surface

B. Provide Length of *PIPING* IF piping was closed-in-place (write "N/A" if NOT closed-in-place).

Length of piping N/A feet

C. TANK SYSTEM REMOVED FROM THE GROUND/SITE

1.) Was obvious contamination observed while excavating, sampling or removing the tank system?

☒ NO - - - - - → Conduct confirmatory sampling - - - - - → See end of this section for options on submission and maintenance of closure records - - - - - → Do not complete item C.2. below.

☐ YES - - - - - → Report release to DEP within 24 hours - - - - → Describe contamination observed and likely source(s) (tank, piping, dispenser, spills, overfills): _____

_____

_____

_____

_____ - - - - → Complete item C.2. below.

2.) Was contamination localized (within three feet of the tank system in every direction with no obvious water contamination)?

☐ YES - - - - → Remove or remediate contaminated soil - - - - → Conduct confirmatory sampling - - - - → See end of this section for options on submission and maintenance of closure records - - - - → Call Indemnification Fund (717-787-0763).

☐ NO - - - - → Continue Interim Remedial Actions - - - - → See end of this section for options on submission and maintenance of closure records - - - - → Call Indemnification Fund (717-787-0763).

D. TANK SYSTEM CLOSED-IN-PLACE OR CHANGED-IN-SERVICE

Was obvious contamination observed during sampling, boring or assessing water depths?

☐ NO - - - - → Conduct confirmatory sampling - - - - → See end of this section for options on submission and maintenance of closure records.

☐ YES - - - - → Report release to DEP within 24 hours - - - - → Describe contamination observed and likely source(s) (tank, piping, dispenser, spills, overfills): _____

_____

_____

_____

Continue with corrective action - - - - → See end of this section for options on submission and maintenance of closure records - - - - → Call Indemnification Fund (717-787-0763).

E. If the answer to C.1. is "no", the answer to C.2. is "yes" or the answer to D. is "no", confirmatory samples are required. Use the sample/analysis information sheet on page 10 of 11 to provide the information on confirmatory sampling and complete the diagram on Page 11 of 11.

Options for Submission and Maintenance of Closure Site Assessment Records

Records of the site assessment must be maintained for at least three years after completion of permanent closure or change-in-service in one of the following ways:

(a) By the owners and operators who took the tank system out of service;
(b) By the current owners and operators of the tank system site; or
(c) By mailing these records to the DEP regional office responsible for the county in which the tank is located if they cannot be maintained at the closed facility.

Where the results of the site assessment indicate that obvious, localized soil contamination was encountered and the analytical results of the confirmatory sampling show levels below the statewide standard/action levels, this closure report form (Sections I, II, and III) or some other acceptable site characterization report must be received by the Department within 180 days of verbally reporting the release.

Where the results of the site assessment indicate that no obvious contamination or obvious, localized contamination was encountered, but the analytical results of the confirmatory sampling show levels above the statewide standard/action levels, or where there is obvious, extensive contamination, Section 245.310(a)(8) of the Corrective Action Process (CAP) regulations requires that details of removal from service be included in the site characterization report. A copy of the completed closure report form should be submitted as part of the site characterization report to satisfy the requirements of Section 245.310(a)(8) of the CAP regulations.

I, GILBERT J. MARSHALL (Print Name), hereby certify, under penalty of law as provided in 18 Pa. C.S. §4904 (relating to unsworn falsification to authorities) that I am the person who performed the site assessment activities associated with the closure of the above referenced storage tank system(s) and that the information provided by me in this closure report (Section III) is true, accurate and complete to the best of my knowledge and belief.

Gilbert J. Marshall	02 / 10 / 2024
Signature of Person Performing Site Assessment	Date
PRINCIPAL GEOLOGIST	MARSHALL GEOSCIENCE, INC.
Title of Person Performing Site Assessment	Name of Company Performing Site Assessment
(610) 454-1172	
Telephone Number of Person Performing Site Assessment	

UNDERGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

SECTION III. Site Assessment Information

Tank Registration # 002 (complete one sheet for EACH tank system and attach ALL laboratory sheets pertaining to that system)

Facility ID Number 51 - 30277

A. Provide depth of *BEDROCK* and *WATER* IF encountered during excavation or soil boring (write "N/A": if NOT encountered).

Bedrock N/A feet below land surface Water N/A feet below land surface

B. Provide Length of *PIPING* IF piping was closed-in-place (write "N/A" if NOT closed-in-place).

Length of piping N/A feet

C. TANK SYSTEM REMOVED FROM THE GROUND/SITE

1.) Was obvious contamination observed while excavating, sampling or removing the tank system?

☒ NO ------→ Conduct confirmatory sampling ------→ See end of this section for options on submission and maintenance of closure records ------→ Do not complete item C.2. below.

☐ YES ------→ Report release to DEP within 24 hours ----→ Describe contamination observed and likely source(s) (tank, piping, dispenser, spills, overfills): _____

_____

_____

_____

_____ ----→ Complete item C.2. below.

2.) Was contamination localized (within three feet of the tank system in every direction with no obvious water contamination)?

☐ YES ----→ Remove or remediate contaminated soil ----→ Conduct confirmatory sampling ----→ See end of this section for options on submission and maintenance of closure records ----→ Call Indemnification Fund (717-787-0763).

☐ NO ----→ Continue Interim Remedial Actions ----→ See end of this section for options on submission and maintenance of closure records ----→ Call Indemnification Fund (717-787-0763).

D. TANK SYSTEM CLOSED-IN-PLACE OR CHANGED-IN-SERVICE

Was obvious contamination observed during sampling, boring or assessing water depths?

☐ NO ----→ Conduct confirmatory sampling ----→ See end of this section for options on submission and maintenance of closure records.

☐ YES ----→ Report release to DEP within 24 hours ----→ Describe contamination observed and likely source(s) (tank, piping, dispenser, spills, overfills): _____

_____

_____

_____

Continue with corrective action ----→ See end of this section for options on submission and maintenance of closure records ----→ Call Indemnification Fund (717-787-0763).

E. If the answer to C.1. is "no", the answer to C.2. is "yes" or the answer to D. is "no", confirmatory samples are required. Use the sample/analysis information sheet on page 10 of 11 to provide the information on confirmatory sampling and complete the diagram on Page 11 of 11.

Options for Submission and Maintenance of Closure Site Assessment Records

Records of the site assessment must be maintained for at least three years after completion of permanent closure or change-in-service in one of the following ways:

(a) By the owners and operators who took the tank system out of service;
(b) By the current owners and operators of the tank system site; or
(c) By mailing these records to the DEP regional office responsible for the county in which the tank is located if they cannot be maintained at the closed facility.

Where the results of the site assessment indicate that obvious, localized soil contamination was encountered and the analytical results of the confirmatory sampling show levels below the statewide standard/action levels, this closure report form (Sections I, II, and III) or some other acceptable site characterization report must be received by the Department within 180 days of verbally reporting the release.

Where the results of the site assessment indicate that no obvious contamination or obvious, localized contamination was encountered, but the analytical results of the confirmatory sampling show levels above the statewide standard/action levels, or where there is obvious, extensive contamination, Section 245.310(a)(8) of the Corrective Action Process (CAP) regulations requires that details of removal from service be included in the site characterization report. A copy of the completed closure report form should be submitted as part of the site characterization report to satisfy the requirements of Section 245.310(a)(8) of the CAP regulations.

I, GILBERT J. MARSHALL, hereby certify, under penalty of law as provided in 18 Pa. C.S. §4904 (relating to unsworn falsification to authorities) that I am the person who performed the site assessment activities associated with the closure of the above referenced storage tank system(s) and that the information provided by me in this closure report (Section III) is true, accurate and complete to the best of my knowledge and belief.

(Print Name)

Gilbert J. Marshall
Signature of Person Performing Site Assessment

02 / 10 / 2024
Date

PRINCIPAL GEOLOGIST
Title of Person Performing Site Assessment

MARSHALL GEOSCIENCE, INC.
Name of Company Performing Site Assessment

(610) 454-1172
Telephone Number of Person Performing Site Assessment

UNDERGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

SECTION III. Site Assessment Information

Tank Registration # 003 (complete one sheet for EACH tank system and attach ALL laboratory sheets pertaining to that system)

Facility ID Number 51 - 30277

A. Provide depth of *BEDROCK* and *WATER* IF encountered during excavation or soil boring (write "N/A": if NOT encountered).

Bedrock N/A feet below land surface Water N/A feet below land surface

B. Provide Length of *PIPING* IF piping was closed-in-place (write "N/A" if NOT closed-in-place).

Length of piping N/A feet

C. TANK SYSTEM REMOVED FROM THE GROUND/SITE

1.) Was obvious contamination observed while excavating, sampling or removing the tank system?

☐ NO ------→ Conduct confirmatory sampling ------→ See end of this section for options on submission and maintenance of closure records ------→ Do not complete item C.2. below.

☒ YES ------→ Report release to DEP within 24 hours ----→ Describe contamination observed and likely source(s) (tank, piping, dispenser, spills, overfills): _____

_____

_____

_____

_____ ----→ Complete item C.2. below.

2.) Was contamination localized (within three feet of the tank system in every direction with no obvious water contamination)?

☐ YES ----→ Remove or remediate contaminated soil ----→ Conduct confirmatory sampling ----→ See end of this section for options on submission and maintenance of closure records ----→ Call Indemnification Fund (717-787-0763).

☒ NO ----→ Continue Interim Remedial Actions ----→ See end of this section for options on submission and maintenance of closure records ----→ Call Indemnification Fund (717-787-0763).

D. TANK SYSTEM CLOSED-IN-PLACE OR CHANGED-IN-SERVICE

Was obvious contamination observed during sampling, boring or assessing water depths?

☐ NO ----→ Conduct confirmatory sampling ----→ See end of this section for options on submission and maintenance of closure records.

☐ YES ----→ Report release to DEP within 24 hours ----→ Describe contamination observed and likely source(s) (tank, piping, dispenser, spills, overfills): _____

_____

_____

_____

Continue with corrective action ----→ See end of this section for options on submission and maintenance of closure records ----→ Call Indemnification Fund (717-787-0763).

E. If the answer to C.1. is "no", the answer to C.2. is "yes" or the answer to D. is "no", confirmatory samples are required. Use the sample/analysis information sheet on page 10 of 11 to provide the information on confirmatory sampling and complete the diagram on Page 11 of 11.

Options for Submission and Maintenance of Closure Site Assessment Records

Records of the site assessment must be maintained for at least three years after completion of permanent closure or change-in-service in one of the following ways:

(a) By the owners and operators who took the tank system out of service;
(b) By the current owners and operators of the tank system site; or
(c) By mailing these records to the DEP regional office responsible for the county in which the tank is located if they cannot be maintained at the closed facility.

Where the results of the site assessment indicate that obvious, localized soil contamination was encountered and the analytical results of the confirmatory sampling show levels below the statewide standard/action levels, this closure report form (Sections I, II, and III) or some other acceptable site characterization report must be received by the Department within 180 days of verbally reporting the release.

Where the results of the site assessment indicate that no obvious contamination or obvious, localized contamination was encountered, but the analytical results of the confirmatory sampling show levels above the statewide standard/action levels, or where there is obvious, extensive contamination, Section 245.310(a)(8) of the Corrective Action Process (CAP) regulations requires that details of removal from service be included in the site characterization report. A copy of the completed closure report form should be submitted as part of the site characterization report to satisfy the requirements of Section 245.310(a)(8) of the CAP regulations.

I, GILBERT J. MARSHALL (Print Name), hereby certify, under penalty of law as provided in 18 Pa. C.S. §4904 (relating to unsworn falsification to authorities) that I am the person who performed the site assessment activities associated with the closure of the above referenced storage tank system(s) and that the information provided by me in this closure report (Section III) is true, accurate and complete to the best of my knowledge and belief.

Gilbert J. Marshall
Signature of Person Performing Site Assessment

02 / 10 / 2024
Date

PRINCIPAL GEOLOGIST
Title of Person Performing Site Assessment

MARSHALL GEOSCIENCE, INC.
Name of Company Performing Site Assessment

(610) 454-1172
Telephone Number of Person Performing Site Assessment

SEE TABLE 1
ATTACHMENT 5

UNDERGROUND STORAGE TANK SYSTEM CLOSURE REPORT FORM

Sample/Analysis Information (Attachment for Section III.)

Facility ID Number 51 - 30277

Sample I.D. (See diagram)	Parameter	Analytical Method[1]		Media	Result (units)	Detection Limit (units)	Date Sample Taken	Date Sample Analyzed
							/ /	/ /
							/ /	/ /
							/ /	/ /
							/ /	/ /
							/ /	/ /
							/ /	/ /
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---

[1] Where EPA Method 5035 is used, indicate sample collection option in the right-hand box of this column using the following codes:

P - Samples placed in a soil sample vial with a preservative present.
E - Samples collected and stored in a soil collection device which is airtight and affords little to no headspace.
N - Samples placed in soil sample vial without a preservative present.

Site Location and Sampling Map - Use this page or suitable facsimile to provide a large-scale map of the site where storage tank systems were closed. Scales between 1" = 10 and 1" = 100 feet frequently work well. Include the following information as each applies to the site: facility name and I.D., county, township or borough, property boundaries or area of interest, buildings, roads and streets with names or route numbers, utilities, location and ID number of storage tank systems removed including piping and dispensers, soil stockpile locations, excavations or other locations of product recovery, north arrow, approximate map scale and legend. Also, show depth and location of samples with sample ID numbers cross-referenced to the same ID numbers shown on Page 10 of 11.

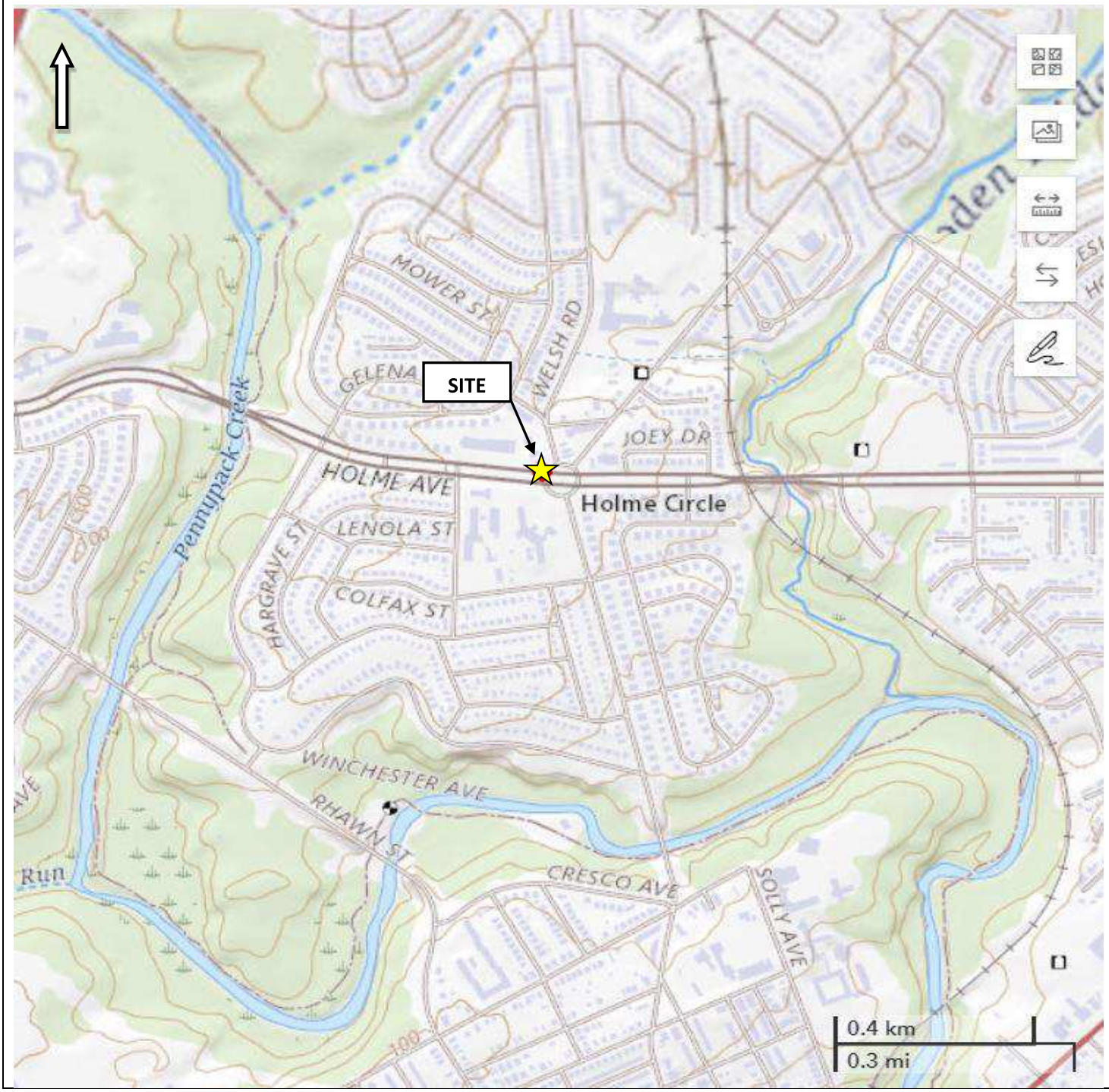
Facility Name and ID: 51 - 30277

County: PHILADELPHIA

Township/Borough: PHILADELPHIA CITY

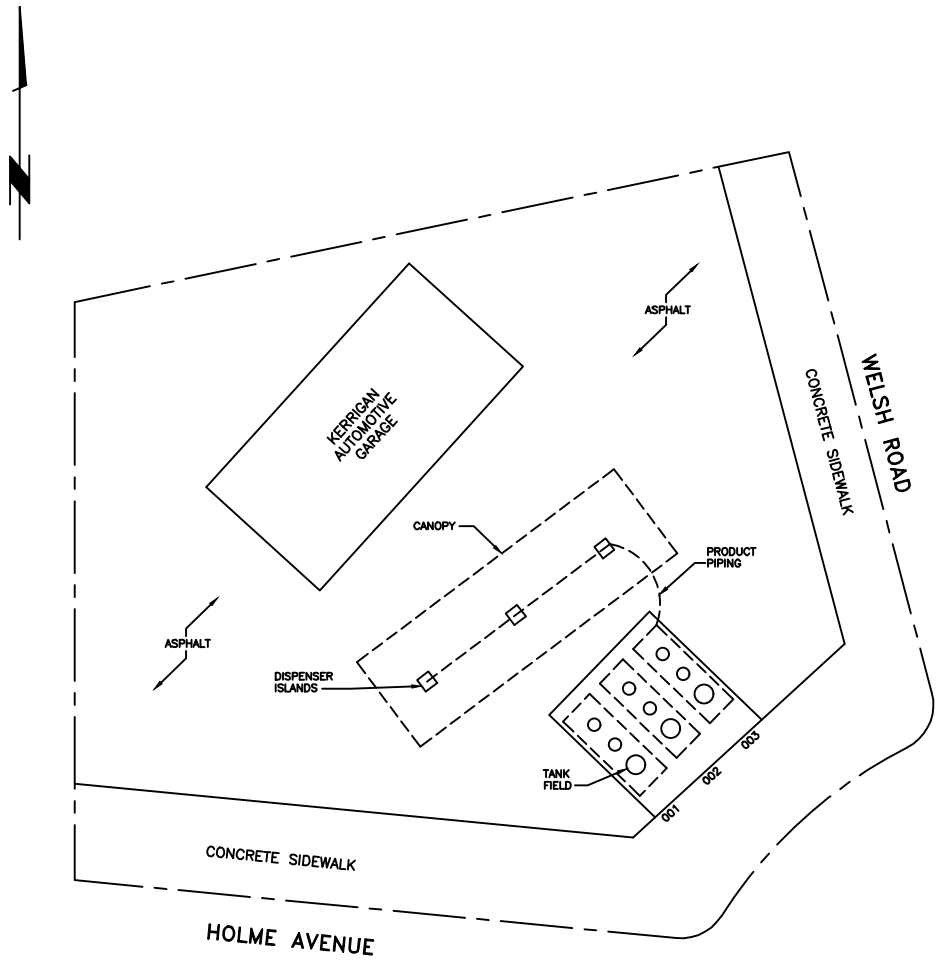
SEE FIGURES 1 THROUGH 3
TABLE 1

FIGURES

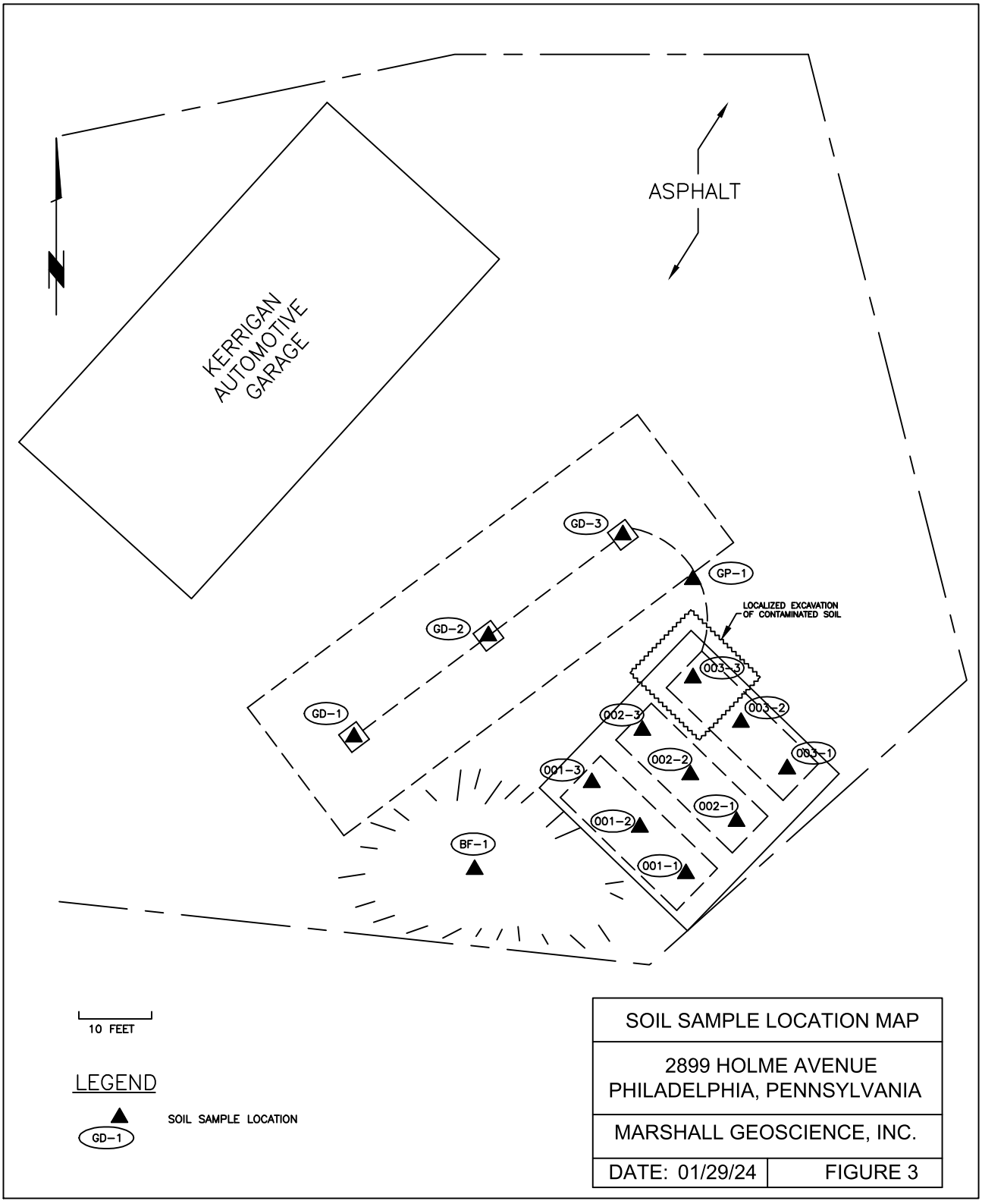


Source: PA Geode, USGS Topographic Map
Contour Interval = 10 feet

SITE LOCATION MAP		
GATZ AUTO 2899 Holme Avenue Philadelphia, Pennsylvania		
MARSHALL GEOSCIENCE, INC.		
DATE: 01/28/24	SCALE: As Shown	FIGURE 1



SITE FEATURES MAP	
2899 HOLME AVENUE PHILADELPHIA, PENNSYLVANIA	
MARSHALL GEOSCIENCE, INC.	
DATE: 01/28/24	FIGURE 2



SOIL SAMPLE LOCATION MAP	
2899 HOLME AVENUE PHILADELPHIA, PENNSYLVANIA	
MARSHALL GEOSCIENCE, INC.	
DATE: 01/29/24	FIGURE 3

TABLES

TABLE 1

SUMMARY OF ANALYTICAL RESULTS

CLOSURE ASSESSMENT SOIL SAMPLES
GASOLINE UST SYSTEMS 001, 002 AND 003

GATZ AUTO
Facility ID No. 51-30277
2899 Holme Avenue
Philadelphia, Pennsylvania

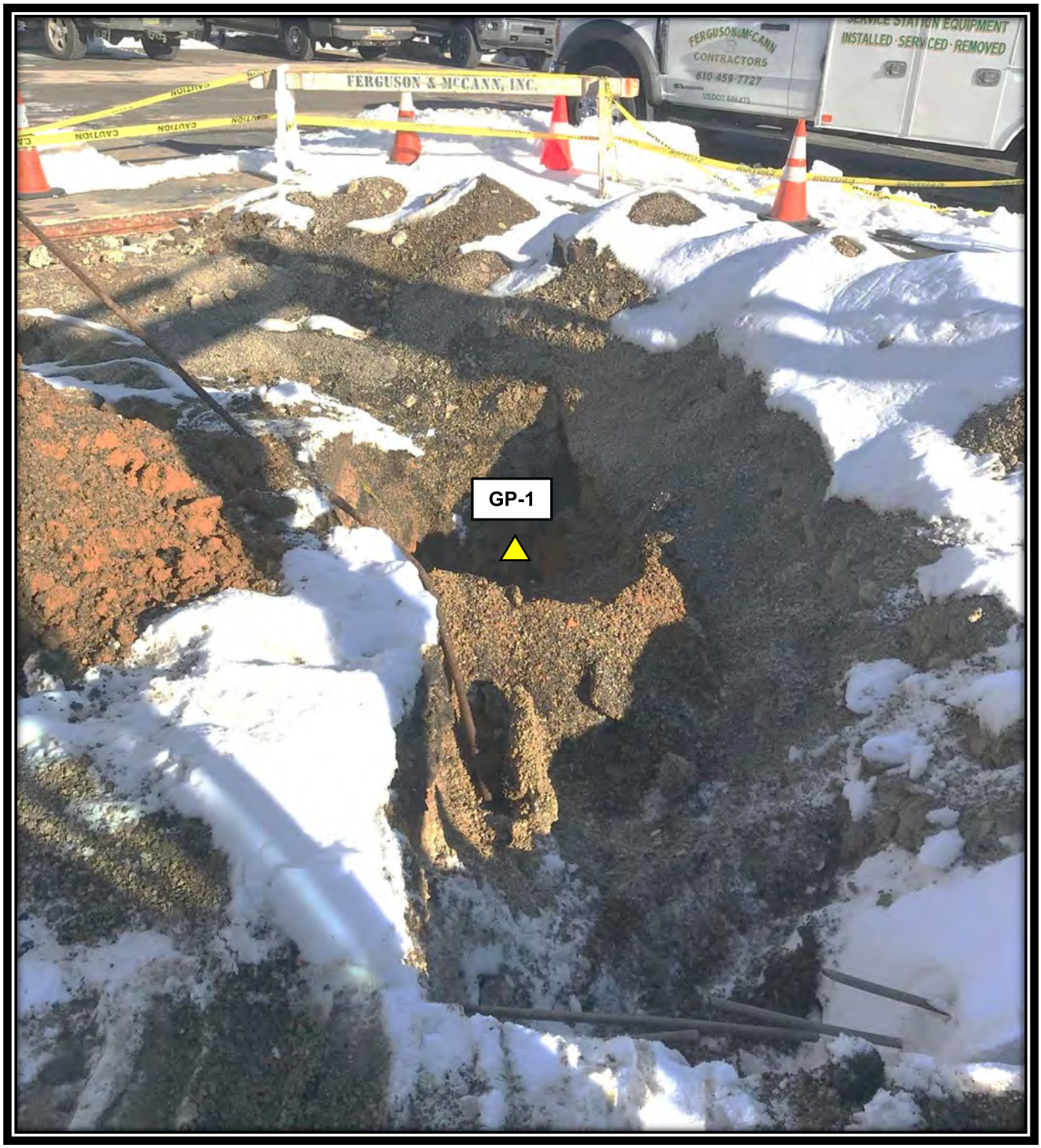
		UST 001			UST 002			UST 003			PRODUCT DISPENSERS			PRODUCT PIPING	BACKFILL		
SAMPLE		001-1	001-2	001-3	002-1	002-2	002-3	003-1	003-2	003-3	GD-1	GD-2	GD-3	GP-1	BF-1	PADEP MSCs	
Date		01/26/2024	01/26/2024	01/26/2024	01/26/2024	01/26/2024	01/26/2024	01/25/2024	01/25/2024	01/29/2024	01/22/2024	01/22/2024	01/22/2024	01/22/2024	01/26/2024	Soil to Ground Water	Direct Contact Non-Residential
Depth	feet	13	13	13	13	13	13	13	13	16	3	3	3	3	0-11	(Used, Non-Res)	(2-15 feet)
PID	ppm	ND	0.7	4.2	6.2	4.3	7.6	0.4	9.6	1,569	ND	1.7	2.2	ND	3.1		
Benzene	mg/kg	0.011 J	<0.0087	0.0099 J	<0.0081	0.037 J	0.063	0.011	0.012 J	**66**	<0.0092	<0.0091	<0.01	<0.009	<0.0099	**0.5**	**330**
Ethylbenzene	mg/kg	<0.012	<0.013	<0.011	<0.012	<0.012	0.037 J	<0.013	<0.012	**120**	<0.014	<0.014	<0.016	<0.013	<0.015	**70**	**1,000**
Isopropylbenzene	mg/kg	<0.012	<0.014	<0.012	<0.013	<0.012	<0.013	<0.013	<0.013	10	<0.015	<0.014	<0.017	<0.014	<0.016	**2,500**	**10,000**
Methyl Tertiary Butyl Ether	mg/kg	<0.0082	<0.0092	<0.0082	<0.0086	<0.0082	<0.0089	<0.009	<0.0086	<0.42	<0.0098	<0.0097	<0.011	<0.0096	<0.01	**2**	**9,800**
Naphthalene	mg/kg	<0.034	<0.038	<0.034	<0.035	<0.034	<0.036	<0.037	<0.035	11	<0.04	<0.04	<0.045	<0.039	<0.043	**25**	**77**
Toluene	mg/kg	<0.056	<0.011	<0.052	0.041	0.22	0.2	0.051	0.032 J	**640**	<0.011	0.02 J	<0.013	<0.011	0.027 J	**100**	**10,000**
1,2,4-Trimethylbenzene	mg/kg	<0.0088	<0.0099	<0.0088	<0.0093	<0.0089	0.029 J	<0.0097	<0.0093	210	<0.011	0.013 J	<0.012	<0.01	<0.011	**300**	**5,400**
1,3,5-Trimethylbenzene	mg/kg	<0.0096	<0.011	<0.0095	<0.01	<0.0096	0.014 J	<0.011	<0.01	55	<0.011	<0.011	<0.013	<0.011	<0.012	**93**	**5,400**
Xylenes	mg/kg	0.014 J	<0.012	<0.018 J	<0.011	0.057 J	0.14	<0.012	<0.011	790	<0.013	0.028 J	<0.014	<0.013	<0.014	**1,000**	**9,100**

Notes:
All concentrations reported in mg/kg on a dry-weight basis.
Bold and highlighted type indicates concentration exceeds a regulatory agency standard.

PADEP Medium-Specific Concentrations (MSCs) published in the Land Recycling and Environmental Remediation Standards Act (Act 2), Pennsylvania Bulletin, November 20, 2021

PHOTOGRAPHS

View of Product Dispenser Areas.

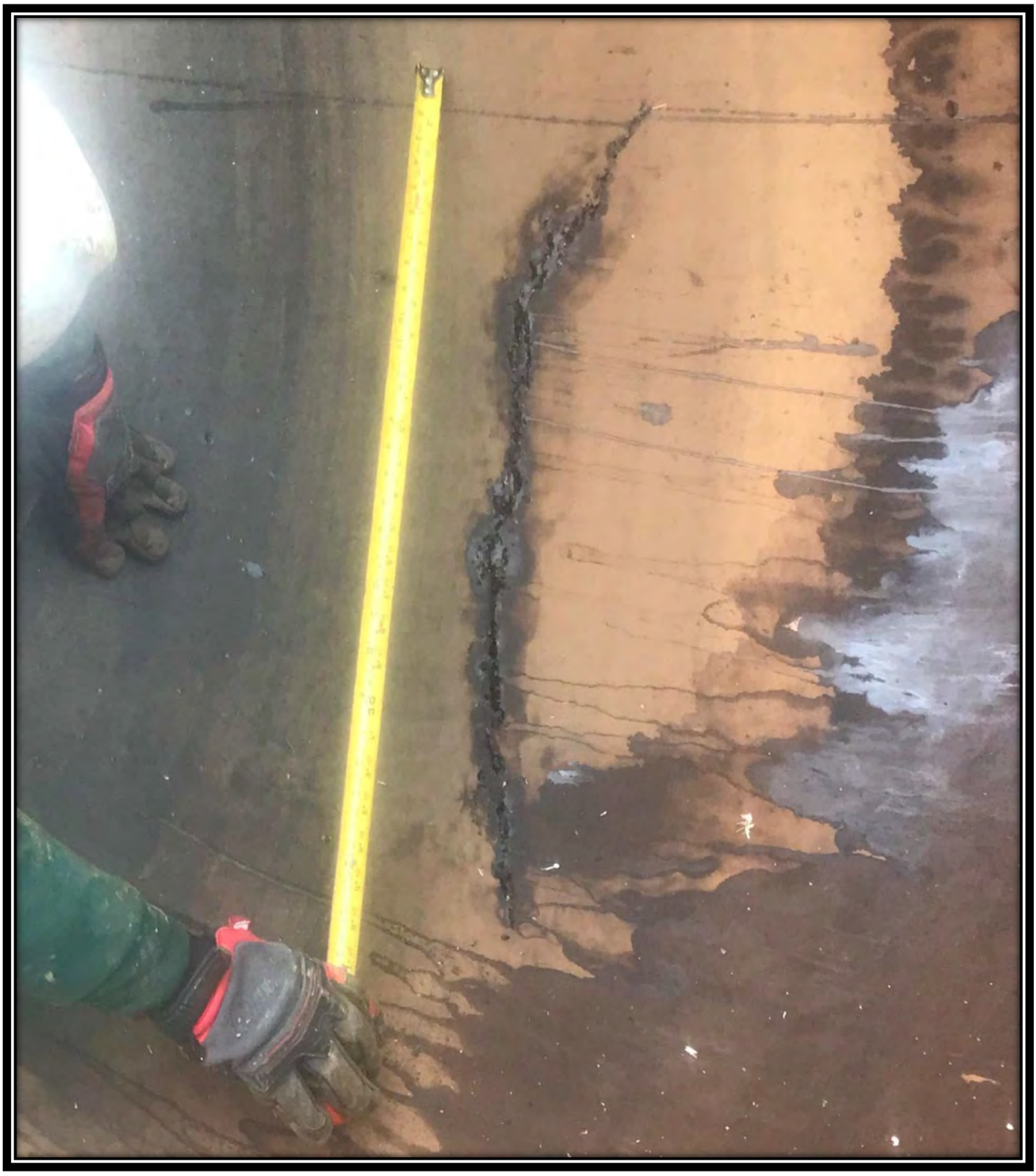


View of Product Piping Trench from Tank Field to Product Dispensers.

Removing UST 001.

Removing UST 002.

Crack at North End of UST 002.
No Evidence of a Release.



Interior View UST 002 Crack.

Removing UST 003.

Crack at North End of UST 003.
Evidence of a Release Observed.

Interior View of Crack in UST 003.

ATTACHMENT 1

DISPOSAL/RECYCLING DOCUMENTATION

RESIDUAL LIQUID WASTE – TANK CLEANING

Miller Env. Group 164 Route 45
Mannington, NJ 08079

CONOCO STATION
2899 HOLME AVE
PHILA PA

Site Job Site - Closed Station BOL 455431
2899 Holmes Rd
Philadelphia PA

Transporter 1 Company Name	US EPA ID Number	Transporter's Phone
Miller Environmental Group	NYD986908085	856-769-9022

Designated Facility name and Site Address	US EPA ID Number	Facility's Phone
Miller Environmental Recycling 108 East Lake Rd Woodstown, NJ 08098	NJD011283174	856-769-9022

US DOT Description (including Proper Shipping Name, Hazard Class or Division, ID Number and Packaing Group	Containers No.	Type	Total Quantity	Unit Wt/Vol
Petroleum contaminated liquids	___	CM	______	P/Y
NRCR	___	DM		P
non haz / non-DOT regulated	001	TT	750	G

Additional Descriptions for Materials Listed Above
ERG#________
24-Hr Emergency Phone: (800)390-9006

TANK CLEANING / LIQUID DISPOSAL

GENERATOR'S CERTIFICATION: I herby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and are non-hazardous by US EPA and applicable state regulations

Printed/Typed Name	Signature	Month / Day / Year
x Daniel Diaz	x [signature]	11/15/12

Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month / Day / Year
x Antonio Grasso	x Antonio Grasso	11/15/12

Facility Owner or Operator: Certification of Receipt of Above Listed Materials

Printed/Typed Name	Signature	Month / Day / Year
x	x	/ /

LOADING INFORMATION
Start Time:________
Arrival Time: 8:30
Depart Time: 10:00
Finish Time:________

Bill To Ferguson & McCann
270 Bodley Road
Aston Pa 19014

PO #______________

Special Instructions
Onsite 8-8:30 to vac gas tank bottoms
Ord by John 610-637-7871

ATTACHMENT 2

DISPOSAL/RECYCLING DOCUMENTATION

SOLID WASTE – TANKS, PIPING AND DISPENSERS

Delaware County Solid Waste Auth

Plant # 1
1521 North Providence Road
Media, PA 19063
(610) 892-9620

Trans# 1019200 Acct# < 166 >

Acct: Ferguson & McCann Inc.

CUSTOMER COPY

Truck# C3319 Trailer#

---DATE---	--TIME--	Site: P1
IN: 1/26/2024	2:36:47 PM	Dir: IN
OUT:1/26/2024	2:49:04 PM	WMID: RIK

Certificat85227
Transac: 1 Disposal-Permit
Payment: 1 Charge
Vehicle: 4 30 Yd. Rolloff
Origin: 2 Delaware County
Material: 15 Commercial Waste-RT
Destin: 2 Plant #1

	Pounds	Tons	
Gross Wt	38,320	19.16	A Scale
Tare Wt	35,120	17.56	B Scale
Net Wt	3,200	1.60	

Tmemo: C3319

Sign: _____

Remark:

CONOCO SITE
2899 HOLME AVE
PHILA PA

DISPOSAL
TRUCKS, LINES, ISLANDS, SUMPS
ALL ASSOCIATED CONTAMINATED
MATERIALS

Conoco Tank Disposal

Delaware County Solid Waste Auth

Plant # 1
1521 North Providence Road
Media, PA 19063
(610) 892-9620

Trans# 1019158 Acct# < 166 >

Acct: Ferguson & McCann Inc.

CUSTOMER COPY

Truck# C3319 Trailer#

---DATE---	--TIME--	Site: P1
IN: 1/26/2024	12:11:17 PM	Dir: IN
OUT:1/26/2024	12:26:46 PM	WMID: RIK

Certificat85227
Transac: 1 Disposal-Permit
Payment: 1 Charge
Vehicle: 4 30 Yd. Rolloff
Origin: 2 Delaware County
Material: 15 Commercial Waste-RT
Destin: 2 Plant #1

	Pounds	Tons	
Gross Wt	42,280	21.14	A Scale
Tare Wt	35,460	17.73	B Scale
Net Wt	6,820	3.41	

Tmemo: C3319

Sign: _____

Remark:

ATTACHMENT 3

GASOLINE-IMPACTED SOIL DISPOSAL/RECYCLING DOCUMENTATION

SOIL SAFE, INC. – LOGAN TOWNSHIP, NEW JERSEY

Tonnages for L5-3558 by Date, Log Number

From 1/1/2024 To 12/31/2024

Date	Log #	Truck Number	Truck Company	City	Batch#	Net
L5-3558						
			3/14/2024			
3/14/2024	18	284	TAT		2778	26.58
3/14/2024	40	284	TAT		2779	30.61
	Total volume for Date = 3/14/2024 (2 detail records)		57.19	Average Weight:	28.595	
Total Volume for Approval Number' = L5-3558 (2 detail records)					57.19	
Total Trucks: 2						
Grand Total				57.19		

Log Number

SOIL SAFE, INC.

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name Ferguson & McCann
Address Bodley Rd. Aston PA
Phone No. 610 459-7727

Generator Site/Location Kerigan Auto
Address 2899 Holme Ave
Philadelphia P.A
Phone No.

Approval Number 3558

Description of Material
Non-Regulated Petroleum Contaminated Soil
ton
Non DOT/RCRA Regulated

ID 284
GROSS 40.40 short GROSS
TARE 13.82 short TARE
NET 26.58 short NET
LOG 18
03/14/2024 09:55AM
TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Chris McKenna — Generator Authorized Agent Name
Signature
Shipment Date

TRANSPORTER

Transporter Name Woolwich SFC
Address 2306 Oldmans Creek Rd
Woolwich Twp
Driver Name (Print) Bill
Vehicle License No. / State / EPA No. AW352W NJS
Truck Number W26 SS 284

I hereby certify that the above named material was picked up at the generator site listed above.

Bill — Driver Signature
14 MAR 24 — Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Bill — Driver Signature
14 MAR 24 — Delivery Date

DESTINATION

Site Name **Soil Safe, Inc. - Bridgeport**
Phone No. **1-856-467-8030**
Address **378 Route 130 Logan Township, NJ 08085**
No left turn on Rt. 130 North into the facility.
Business hours are: Monday through Friday 7 AM to 5 PM. 5 PM to 10 PM By Appointment only. Saturday by appointment only.

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

L Garcia — Name of Authorized Agent
Signature
3/14/24 — Receipt Date

White - Facility Green - Facility Yellow - Generator Pink - Broker Goldenrod - Contractor Blue - Trucking Co.

Log Number

SOIL SAFE, INC.

NON-HAZARDOUS MATERIAL MANIFEST

GENERATOR

Generator Name Ferguson & McCann
Address Bodley Rd. Aston PA
Phone No. 610 459 7727

Generator Site/Location Kerrigan Auto
Address 2899 Holme Ave
Philadelphia PA
Phone No.

Approval Number 3558

Description of Material
ton
Non-Regulated Petroleum Contaminated Soil
ton RECALLED
ton
Non DOT/RCRA Regulated

ID 284
GROSS 44.43 short GROSS
TARE 13.82 short TARE
NET 30.61 short NET
LOG 40
03/14/2024 12:47PM
TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name | Signature | Shipment Date

TRANSPORTER

Transporter Name Woolwich S46
Address 2306 Oldmans Creek Rd
Woolwich Twp
Driver Name (Print) BM
Vehicle License No. / State / EPA No. AW352W NJ
Truck Number W26 SS 284

I hereby certify that the above named material was picked up at the generator site listed above.

BM 14 Mar 24
Driver Signature | Shipment Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

BM 14 mar 24
Driver Signature | Delivery Date

DESTINATION

Site Name **Soil Safe, Inc. - Bridgeport** Phone No. **1-856-467-8030**

Address **378 Route 130 Logan Township, NJ 08085**
No left turn on Rt. 130 North into the facility.
Business hours are: Monday through Friday 7 AM to 5 PM. 5 PM to 10 PM By Appointment only. Saturday by appointment only.

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Name of Authorized Agent | Signature | Receipt Date
d Garcia 3 14 24

White - Facility Green - Facility Yellow - Generator Pink - Broker Goldenrod - Contractor Blue - Trucking Co.

ATTACHMENT 4

DISPOSAL/RECYCLING DOCUMENTATION

SOLID WASTE – CONCRETE

BLUE MOUNTAIN MULCH

(610) 558-3294 ♦ Aston, PA

Conrete/Asphalt Disposal
Conoco Station
2899 Holme Ave
Phila PA

INVOICE

0719

TO Ferguson & McClintic Inc
270 Bullard Rd
Aston PA 19014

PHONE # 610-459-7727

DATE ORDERED

DATE REQUESTED 11-12

SALES REP

PO #

MATERIAL DESCRIPTION	QTY	PRICE	MATERIAL DESCRIPTION	QTY	PRICE	AMOUNT
Black Dyed Hardwood Mulch			Top Soil Screened			
Brown Dyed Hardwood Mulch			Unscreened Top Soil			
Triple Shredded Organic Mulch			Amended Soil			
Red Dyed Hardwood Mulch			Compost			
Playground Mulch			Fill Dirt			
3/4" Clean Stone			2A Modified			
River Rock 1-3" 3-6"			Recycled Concrete	21.24		
			Delivery Fee			

DUMP - DESCRIPTION

	Chips	Mixed	Leaves	Logs	Concrete Clean	Concrete Rebar	Delivery		Pick Up	
Pickup Tk										
12' Dump Tk										
16' Dump Tk										
Dumpster										
Dump Trailer										
Tri Axle 6					6 LOADS					
Log Truck										
									Sub Total	
Signature:									Tax 6%	
									Total	

THANK YOU CUSTOMER ACCT CHECK CREDIT CARD

Blue Mountain Mulch, LLC will not be responsible for any damage beyond the curb line.

Gill Quarries, Inc.
P.O. Box187
Fairview Village, PA, 19409

Ticket #: 944022
Date: 01/24/2024 12:21 PM
Phone: (610) 584-6061
Fax: (610) 584-0250

Customer: FERGUSON_MCCAN - Ferguson & McCann Inc.
270 Bodley Road
Aston PA, 19014
(610) 459-7727

Order Number: BOLMAR-ST-1100
Tons: 0.000
Loads: 4

STREET,WEST
CHESTER PA
1100 N BOLMAR STREET
39.96475178579147, -75.5950969

Truck: FERGMC58 -
DANIELA - LIC # 95423
Remarks: 2022 Pricing is now in effect.

Material	Gross	Scale	Tare	Scale	Net
Tri-axle Concrete (Dump Fee)	0	0	0	STORED	0

Material	Quantity	Price	Material $	Delivery $	Misc $	Tax $	Line Total $
Tri-axle Concrete (Dump Fee)	1.000 EA						

Scale Master: DANIELA - LIC # 95423

Signature

Note: Gill Quarries is not responsible for deliveries beyond the pavement.

Gill Quarries, Inc.
P.O. Box187
Fairview Village, PA, 19409

Ticket #: 944022
Date: 01/24/2024 12:21 PM
Phone: (610) 584-6061
Fax: (610) 584-0250

Customer: FERGUSON_MCCAN - Ferguson & McCann Inc.
270 Bodley Road
Aston PA, 19014
(610) 459-7727

Order Number: BOLMAR-ST-1100
Tons: 0.000
Loads: 4

STREET,WEST
CHESTER PA
1100 N BOLMAR STREET
39.96475178579147, -75.5950969

Truck: FERGMC58 -
DANIELA - LIC # 95423
Remarks: 2022 Pricing is now in effect.

Material	Gross	Scale	Tare	Scale	Net
Tri-axle Concrete (Dump Fee)	0	0	0	STORED	0

Material	Quantity	Price	Material $	Delivery $	Misc $	Tax $	Line Total $
Tri-axle Concrete (Dump Fee)	1.000 EA						

Scale Master: DANIELA - LIC # 95423

Signature

Note: Gill Quarries is not responsible for deliveries beyond the pavement.

ATTACHMENT 5

LABORATORY REPORT

UST CLOSURE ASSESSMENT
CONFIRMATION SOIL SAMPLES

eurofins | Environment Testing

1 2 3 4 5 6 7 8 9 10 11

ANALYTICAL REPORT

PREPARED FOR

Attn: Gilbert Marshall
Marshall Geoscience
170 East First Avenue
Collegeville, Pennsylvania 19426

Generated 1/29/2024 9:12:31 AM

JOB DESCRIPTION

019333

JOB NUMBER

460-296847-1

Eurofins Edison
777 New Durham Road
Edison NJ 08817

See page two for job notes and contact information.

myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

Authorization

Generated
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Authorized for release by
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Table of Contents

Definitions/Glossary

Client: Marshall Geoscience
Project/Site: 019333

Job ID: 460-296847-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
460-296847-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 1/23/2024 7:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.1°C

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

Method 8260D - Volatile Organic Compounds by GC/MS
Samples GD-1 (296847-1), GD-2 (296847-2), GD-3 (296847-3) and GP-1 (296847-4) were analyzed for Volatile Organic Compounds by GC/MS. The samples were prepared on 1/25/2024 and analyzed on 1/26/2024 and 1/27/2024.

Method Moisture - Percent Moisture
Samples GD-1 (296847-1), GD-2 (296847-2), GD-3 (296847-3) and GP-1 (296847-4) were analyzed for Percent Moisture. The samples were analyzed on 1/24/2024.

Client Sample ID: GD-1

Lab Sample ID: 460-296847-1

Date Collected: 01/22/24 09:54
Date Received: 01/23/24 19:00

Matrix: Solid
Percent Solids: 85.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	9.2	U	46	9.2	ug/Kg	☼	01/25/24 17:59	01/27/24 12:36	50
Toluene	11	U	46	11	ug/Kg	☼	01/25/24 17:59	01/27/24 12:36	50
Ethylbenzene	14	U	46	14	ug/Kg	☼	01/25/24 17:59	01/27/24 12:36	50
Xylenes, Total	13	U	91	13	ug/Kg	☼	01/25/24 17:59	01/27/24 12:36	50
MTBE	9.8	U	46	9.8	ug/Kg	☼	01/25/24 17:59	01/27/24 12:36	50
Naphthalene	40	U	46	40	ug/Kg	☼	01/25/24 17:59	01/27/24 12:36	50
1,2,4-Trimethylbenzene	11	U	46	11	ug/Kg	☼	01/25/24 17:59	01/27/24 12:36	50
1,3,5-Trimethylbenzene	11	U	46	11	ug/Kg	☼	01/25/24 17:59	01/27/24 12:36	50
Isopropylbenzene	15	U	46	15	ug/Kg	☼	01/25/24 17:59	01/27/24 12:36	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*68 - 150*	*01/25/24 17:59*	*01/27/24 12:36*	*50*
Toluene-d8 (Surr)	*115*		*73 - 147*	*01/25/24 17:59*	*01/27/24 12:36*	*50*
Bromofluorobenzene	*123*		*70 - 141*	*01/25/24 17:59*	*01/27/24 12:36*	*50*
Dibromofluoromethane (Surr)	*110*		*68 - 142*	*01/25/24 17:59*	*01/27/24 12:36*	*50*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**14.5**		1.0	1.0	%			01/24/24 16:57	1
Percent Solids (EPA Moisture)	**85.5**		1.0	1.0	%			01/24/24 16:57	1

Client Sample ID: GD-2

Lab Sample ID: 460-296847-2

Date Collected: 01/22/24 10:04
Date Received: 01/23/24 19:00

Matrix: Solid
Percent Solids: 92.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	9.1	U	45	9.1	ug/Kg	☼	01/25/24 17:59	01/27/24 13:01	50
Toluene	**20**	**J**	45	11	ug/Kg	☼	01/25/24 17:59	01/27/24 13:01	50
Ethylbenzene	14	U	45	14	ug/Kg	☼	01/25/24 17:59	01/27/24 13:01	50
Xylenes, Total	**28**	**J**	90	13	ug/Kg	☼	01/25/24 17:59	01/27/24 13:01	50
MTBE	9.7	U	45	9.7	ug/Kg	☼	01/25/24 17:59	01/27/24 13:01	50
Naphthalene	40	U	45	40	ug/Kg	☼	01/25/24 17:59	01/27/24 13:01	50
1,2,4-Trimethylbenzene	**13**	**J**	45	10	ug/Kg	☼	01/25/24 17:59	01/27/24 13:01	50
1,3,5-Trimethylbenzene	11	U	45	11	ug/Kg	☼	01/25/24 17:59	01/27/24 13:01	50
Isopropylbenzene	14	U	45	14	ug/Kg	☼	01/25/24 17:59	01/27/24 13:01	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*68 - 150*	*01/25/24 17:59*	*01/27/24 13:01*	*50*
Toluene-d8 (Surr)	*110*		*73 - 147*	*01/25/24 17:59*	*01/27/24 13:01*	*50*
Bromofluorobenzene	*103*		*70 - 141*	*01/25/24 17:59*	*01/27/24 13:01*	*50*
Dibromofluoromethane (Surr)	*96*		*68 - 142*	*01/25/24 17:59*	*01/27/24 13:01*	*50*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**7.5**		1.0	1.0	%			01/24/24 16:57	1
Percent Solids (EPA Moisture)	**92.5**		1.0	1.0	%			01/24/24 16:57	1

Client Sample ID: GD-3

Lab Sample ID: 460-296847-3

Date Collected: 01/22/24 10:16
Matrix: Solid
Date Received: 01/23/24 19:00
Percent Solids: 81.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	10	U	52	10	ug/Kg	☼	01/25/24 18:00	01/27/24 13:26	50
Toluene	13	U	52	13	ug/Kg	☼	01/25/24 18:00	01/27/24 13:26	50
Ethylbenzene	16	U	52	16	ug/Kg	☼	01/25/24 18:00	01/27/24 13:26	50
Xylenes, Total	14	U	100	14	ug/Kg	☼	01/25/24 18:00	01/27/24 13:26	50
MTBE	11	U	52	11	ug/Kg	☼	01/25/24 18:00	01/27/24 13:26	50
Naphthalene	45	U	52	45	ug/Kg	☼	01/25/24 18:00	01/27/24 13:26	50
1,2,4-Trimethylbenzene	12	U	52	12	ug/Kg	☼	01/25/24 18:00	01/27/24 13:26	50
1,3,5-Trimethylbenzene	13	U	52	13	ug/Kg	☼	01/25/24 18:00	01/27/24 13:26	50
Isopropylbenzene	17	U	52	17	ug/Kg	☼	01/25/24 18:00	01/27/24 13:26	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*68 - 150*	*01/25/24 18:00*	*01/27/24 13:26*	*50*
Toluene-d8 (Surr)	*120*		*73 - 147*	*01/25/24 18:00*	*01/27/24 13:26*	*50*
Bromofluorobenzene	*126*		*70 - 141*	*01/25/24 18:00*	*01/27/24 13:26*	*50*
Dibromofluoromethane (Surr)	*113*		*68 - 142*	*01/25/24 18:00*	*01/27/24 13:26*	*50*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**18.3**		1.0	1.0	%			01/24/24 16:57	1
Percent Solids (EPA Moisture)	**81.7**		1.0	1.0	%			01/24/24 16:57	1

Client Sample ID: GP-1

Lab Sample ID: 460-296847-4

Date Collected: 01/22/24 10:23
Matrix: Solid
Date Received: 01/23/24 19:00
Percent Solids: 82.3

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	9.0	U	45	9.0	ug/Kg	☼	01/25/24 18:00	01/26/24 16:17	50
Toluene	11	U	45	11	ug/Kg	☼	01/25/24 18:00	01/26/24 16:17	50
Ethylbenzene	13	U	45	13	ug/Kg	☼	01/25/24 18:00	01/26/24 16:17	50
Xylenes, Total	13	U	89	13	ug/Kg	☼	01/25/24 18:00	01/26/24 16:17	50
MTBE	9.6	U	45	9.6	ug/Kg	☼	01/25/24 18:00	01/26/24 16:17	50
Naphthalene	39	U	45	39	ug/Kg	☼	01/25/24 18:00	01/26/24 16:17	50
1,2,4-Trimethylbenzene	10	U	45	10	ug/Kg	☼	01/25/24 18:00	01/26/24 16:17	50
1,3,5-Trimethylbenzene	11	U	45	11	ug/Kg	☼	01/25/24 18:00	01/26/24 16:17	50
Isopropylbenzene	14	U	45	14	ug/Kg	☼	01/25/24 18:00	01/26/24 16:17	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*118*		*68 - 150*	*01/25/24 18:00*	*01/26/24 16:17*	*50*
Toluene-d8 (Surr)	*122*		*73 - 147*	*01/25/24 18:00*	*01/26/24 16:17*	*50*
Bromofluorobenzene	*132*		*70 - 141*	*01/25/24 18:00*	*01/26/24 16:17*	*50*
Dibromofluoromethane (Surr)	*126*		*68 - 142*	*01/25/24 18:00*	*01/26/24 16:17*	*50*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**17.7**		1.0	1.0	%			01/24/24 16:57	1
Percent Solids (EPA Moisture)	**82.3**		1.0	1.0	%			01/24/24 16:57	1

Lab Chronicle

Client: Marshall Geoscience
Project/Site: 019333

Job ID: 460-296847-1

Client Sample ID: GD-1
Lab Sample ID: 460-296847-1
Date Collected: 01/22/24 09:54
Matrix: Solid
Date Received: 01/23/24 19:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	956219	CJC	EET EDI	01/24/24 16:57

Client Sample ID: GD-1
Lab Sample ID: 460-296847-1
Date Collected: 01/22/24 09:54
Matrix: Solid
Date Received: 01/23/24 19:00
Percent Solids: 85.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			956434	MXW	EET EDI	01/25/24 17:59
Total/NA	Analysis	8260D		50	956700	MZS	EET EDI	01/27/24 12:36

Client Sample ID: GD-2
Lab Sample ID: 460-296847-2
Date Collected: 01/22/24 10:04
Matrix: Solid
Date Received: 01/23/24 19:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	956219	CJC	EET EDI	01/24/24 16:57

Client Sample ID: GD-2
Lab Sample ID: 460-296847-2
Date Collected: 01/22/24 10:04
Matrix: Solid
Date Received: 01/23/24 19:00
Percent Solids: 92.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			956434	MXW	EET EDI	01/25/24 17:59
Total/NA	Analysis	8260D		50	956700	MZS	EET EDI	01/27/24 13:01

Client Sample ID: GD-3
Lab Sample ID: 460-296847-3
Date Collected: 01/22/24 10:16
Matrix: Solid
Date Received: 01/23/24 19:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	956219	CJC	EET EDI	01/24/24 16:57

Client Sample ID: GD-3
Lab Sample ID: 460-296847-3
Date Collected: 01/22/24 10:16
Matrix: Solid
Date Received: 01/23/24 19:00
Percent Solids: 81.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			956434	MXW	EET EDI	01/25/24 18:00
Total/NA	Analysis	8260D		50	956700	MZS	EET EDI	01/27/24 13:26

Client Sample ID: GP-1
Lab Sample ID: 460-296847-4
Date Collected: 01/22/24 10:23
Matrix: Solid
Date Received: 01/23/24 19:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	956219	CJC	EET EDI	01/24/24 16:57

Lab Chronicle

Client: Marshall Geoscience
Project/Site: 019333

Job ID: 460-296847-1

Client Sample ID: GP-1
Date Collected: 01/22/24 10:23
Date Received: 01/23/24 19:00

Lab Sample ID: 460-296847-4
Matrix: Solid
Percent Solids: 82.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			956434	MXW	EET EDI	01/25/24 18:00
Total/NA	Analysis	8260D		50	956526	MZS	EET EDI	01/26/24 16:17

Laboratory References:

EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Accreditation/Certification Summary

Client: Marshall Geoscience
Project/Site: 019333

Job ID: 460-296847-1

Laboratory: Eurofins Edison

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	68-00522	02-29-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Marshall Geoscience
Project/Site: 019333

Job ID: 460-296847-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET EDI
Moisture	Percent Moisture	EPA	EET EDI
5035	Closed System Purge and Trap	SW846	EET EDI

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: Marshall Geoscience
Project/Site: 019333

Job ID: 460-296847-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-296847-1	GD-1	Solid	01/22/24 09:54	01/23/24 19:00
460-296847-2	GD-2	Solid	01/22/24 10:04	01/23/24 19:00
460-296847-3	GD-3	Solid	01/22/24 10:16	01/23/24 19:00
460-296847-4	GP-1	Solid	01/22/24 10:23	01/23/24 19:00

Chain of Custody Record

659086

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Address _____

Regulatory Program ☐ DW ☐ NPDES ☐ RCRA ☒ Other PADEP

TAL-8210

Client Contact	Project Manager: GIL MARSHALL	Site Contact: GIL MARSHALL	Date	COC No:
Company Name: MARSHALL GEOSCIENCE	Tel/Email 610-454-1172	Lab Contact: JILL MILLER	Carrier:	1 of 1 COCs
Address: 170 1ST AVENUE	Analysis Turnaround Time			Sampler: GIL MARSHALL
City/State/Zip: COLLEGEVILLE, PA 19426	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 610-454-1172	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: 019333	☐ 1 week			Job / SDG No 296847
Site: 019333	☐ 2 days			
P O # 019333	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PADEP LIST SHORT LIST	UNLEADED GASOLINE	Sample Specific Notes:
GD-1	1/22/24	0954	G	SOIL	2				X	-1
GD-2	1/22/24	1004	G	SOIL	2				X	-2
GD-3	1/22/24	1016	G	SOIL	2				X	-3
GP-1	1/22/24	1023	G	SOIL	2				X	-4

460-296847 Chain of Custody

Preservation Used 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification

Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments.

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No | Cooler Temp. (°C): Obs'd._____ Corr'd._____ | Therm ID No._____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
GM	MARSHALL GEOSCIENCE			EETN-KOP	1/23/24 739
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	EETN-KOP 17 S3	1-23-24		EDA	1/23
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
	EDA	1/23 1900			1/23/24 1900

1/29/2024

Eurofins TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 296947

Number of Coolers: 1 IR Gun # KQ-2

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	2.0 °C	2.1 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3	°C	°C	Cooler #6:	°C	°C	Cooler #9	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below:

Sample No(s). adjusted _____

Preservative Name/Conc. _____ Volume of Preservative used (ml) _____

Lot # of Preservative(s). _____ Expiration Date. _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials HS Date 1/23/24

Login Sample Receipt Checklist

Client: Marshall Geoscience

Job Number: 460-296847-1

Login Number: 296847

List Source: Eurofins Edison

List Number: 1

Creator: Lysy, Susan

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

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1 2 3 4 5 6 7 8 9 10 11

ANALYTICAL REPORT

PREPARED FOR

Attn: Gilbert Marshall
Marshall Geoscience
170 East First Avenue
Collegeville, Pennsylvania 19426

Generated 2/9/2024 9:12:50 PM

JOB DESCRIPTION

019333

JOB NUMBER

460-297275-1

Eurofins Edison
777 New Durham Road
Edison NJ 08817

See page two for job notes and contact information.

myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

Authorization

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Authorized for release by
Jill Miller, Senior Project Manager
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(484)802-0929

Table of Contents

Definitions/Glossary

Client: Marshall Geoscience
Project/Site: 019333

Job ID: 460-297275-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
460-297275-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 1/30/2024 7:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.1°C

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

Receipt Exceptions
Containers were received for the following sample, but it was not listed on the COC. BF-1 (460-297275-10). Client sent permission to analyze.

Method 8260D - Volatile Organic Compounds by GC/MS
Samples 001-1 (297275-1), 001-2 (297275-2), 001-3 (297275-3), 002-1 (297275-4), 002-2 (297275-5), 002-3 (297275-6), 003-1 (297275-7), 003-2 (297275-8), 003-3 (297275-9) and BF-1 (297275-10) were analyzed for Volatile Organic Compounds by GC/MS. The samples were prepared on 2/1/2024 and analyzed on 2/2/2024, 2/3/2024 and 2/5/2024.

Sample 003-3 (297275-9)[2500x] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The laboratory control sample duplicate (LCSD) for analytical batch 460-957750 recovered outside control limits for the following analyte: Toluene. This analyte was biased low in the LCSD and within control limits in LCS, the data have been flagged and reported.

The following sample was diluted to bring the concentration of target analytes within the calibration range: 003-3 (460-297275-9). Elevated reporting limits (RLs) are provided.

The following sample required a dilution due to the nature of the sample matrix: 003-3 (460-297275-9). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method Moisture - Percent Moisture
Samples 001-1 (297275-1), 001-2 (297275-2), 001-3 (297275-3), 002-1 (297275-4), 002-2 (297275-5), 002-3 (297275-6), 003-1 (297275-7), 003-2 (297275-8), 003-3 (297275-9) and BF-1 (297275-10) were analyzed for Percent Moisture. The samples were analyzed on 2/1/2024.

Client: Marshall Geoscience
Project/Site: 019333

Job ID: 460-297275-1

Client Sample ID: 001-1

Lab Sample ID: 460-297275-1

Date Collected: 01/26/24 12:17
Matrix: Solid
Date Received: 01/30/24 19:00
Percent Solids: 99.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**11**	**J**	38	7.8	ug/Kg	☼	02/01/24 14:26	02/02/24 12:55	50
Toluene	**56**		38	9.6	ug/Kg	☼	02/01/24 14:26	02/02/24 12:55	50
Ethylbenzene	12	U	38	12	ug/Kg	☼	02/01/24 14:26	02/02/24 12:55	50
Xylenes, Total	**14**	**J**	77	11	ug/Kg	☼	02/01/24 14:26	02/02/24 12:55	50
MTBE	8.2	U	38	8.2	ug/Kg	☼	02/01/24 14:26	02/02/24 12:55	50
Naphthalene	34	U	38	34	ug/Kg	☼	02/01/24 14:26	02/02/24 12:55	50
1,2,4-Trimethylbenzene	8.8	U	38	8.8	ug/Kg	☼	02/01/24 14:26	02/02/24 12:55	50
1,3,5-Trimethylbenzene	9.6	U	38	9.6	ug/Kg	☼	02/01/24 14:26	02/02/24 12:55	50
Isopropylbenzene	12	U	38	12	ug/Kg	☼	02/01/24 14:26	02/02/24 12:55	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*68 - 150*	*02/01/24 14:26*	*02/02/24 12:55*	*50*
Toluene-d8 (Surr)	*95*		*73 - 147*	*02/01/24 14:26*	*02/02/24 12:55*	*50*
Bromofluorobenzene	*100*		*70 - 141*	*02/01/24 14:26*	*02/02/24 12:55*	*50*
Dibromofluoromethane (Surr)	*93*		*68 - 142*	*02/01/24 14:26*	*02/02/24 12:55*	*50*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	1.0	U	1.0	1.0	%			02/01/24 17:53	1
Percent Solids (EPA Moisture)	**99.1**		1.0	1.0	%			02/01/24 17:53	1

Client Sample ID: 001-2

Lab Sample ID: 460-297275-2

Date Collected: 01/26/24 12:22
Matrix: Solid
Date Received: 01/30/24 19:00
Percent Solids: 99.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	8.7	U	43	8.7	ug/Kg	☼	02/01/24 14:26	02/02/24 13:20	50
Toluene	11	U	43	11	ug/Kg	☼	02/01/24 14:26	02/02/24 13:20	50
Ethylbenzene	13	U	43	13	ug/Kg	☼	02/01/24 14:26	02/02/24 13:20	50
Xylenes, Total	12	U	86	12	ug/Kg	☼	02/01/24 14:26	02/02/24 13:20	50
MTBE	9.2	U	43	9.2	ug/Kg	☼	02/01/24 14:26	02/02/24 13:20	50
Naphthalene	38	U	43	38	ug/Kg	☼	02/01/24 14:26	02/02/24 13:20	50
1,2,4-Trimethylbenzene	9.9	U	43	9.9	ug/Kg	☼	02/01/24 14:26	02/02/24 13:20	50
1,3,5-Trimethylbenzene	11	U	43	11	ug/Kg	☼	02/01/24 14:26	02/02/24 13:20	50
Isopropylbenzene	14	U	43	14	ug/Kg	☼	02/01/24 14:26	02/02/24 13:20	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*68 - 150*	*02/01/24 14:26*	*02/02/24 13:20*	*50*
Toluene-d8 (Surr)	*97*		*73 - 147*	*02/01/24 14:26*	*02/02/24 13:20*	*50*
Bromofluorobenzene	*105*		*70 - 141*	*02/01/24 14:26*	*02/02/24 13:20*	*50*
Dibromofluoromethane (Surr)	*90*		*68 - 142*	*02/01/24 14:26*	*02/02/24 13:20*	*50*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**1.0**		1.0	1.0	%			02/01/24 17:53	1
Percent Solids (EPA Moisture)	**99.0**		1.0	1.0	%			02/01/24 17:53	1

Client Sample ID: 001-3

Lab Sample ID: 460-297275-3

Date Collected: 01/26/24 12:29
Matrix: Solid
Date Received: 01/30/24 19:00
Percent Solids: 98.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**9.9**	**J**	38	7.7	ug/Kg	☼	02/01/24 14:27	02/02/24 13:45	50
Toluene	**52**		38	9.5	ug/Kg	☼	02/01/24 14:27	02/02/24 13:45	50
Ethylbenzene	11	U	38	11	ug/Kg	☼	02/01/24 14:27	02/02/24 13:45	50
Xylenes, Total	**18**	**J**	76	11	ug/Kg	☼	02/01/24 14:27	02/02/24 13:45	50
MTBE	8.2	U	38	8.2	ug/Kg	☼	02/01/24 14:27	02/02/24 13:45	50
Naphthalene	34	U	38	34	ug/Kg	☼	02/01/24 14:27	02/02/24 13:45	50
1,2,4-Trimethylbenzene	8.8	U	38	8.8	ug/Kg	☼	02/01/24 14:27	02/02/24 13:45	50
1,3,5-Trimethylbenzene	9.5	U	38	9.5	ug/Kg	☼	02/01/24 14:27	02/02/24 13:45	50
Isopropylbenzene	12	U	38	12	ug/Kg	☼	02/01/24 14:27	02/02/24 13:45	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*68 - 150*	*02/01/24 14:27*	*02/02/24 13:45*	*50*
Toluene-d8 (Surr)	*97*		*73 - 147*	*02/01/24 14:27*	*02/02/24 13:45*	*50*
Bromofluorobenzene	*102*		*70 - 141*	*02/01/24 14:27*	*02/02/24 13:45*	*50*
Dibromofluoromethane (Surr)	*99*		*68 - 142*	*02/01/24 14:27*	*02/02/24 13:45*	*50*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**1.3**		1.0	1.0	%			02/01/24 17:53	1
Percent Solids (EPA Moisture)	**98.7**		1.0	1.0	%			02/01/24 17:53	1

Client Sample ID: 002-1

Lab Sample ID: 460-297275-4

Date Collected: 01/26/24 11:01
Matrix: Solid
Date Received: 01/30/24 19:00
Percent Solids: 97.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	8.1	U	40	8.1	ug/Kg	☼	02/01/24 14:27	02/02/24 14:10	50
Toluene	**41**		40	10	ug/Kg	☼	02/01/24 14:27	02/02/24 14:10	50
Ethylbenzene	12	U	40	12	ug/Kg	☼	02/01/24 14:27	02/02/24 14:10	50
Xylenes, Total	11	U	80	11	ug/Kg	☼	02/01/24 14:27	02/02/24 14:10	50
MTBE	8.6	U	40	8.6	ug/Kg	☼	02/01/24 14:27	02/02/24 14:10	50
Naphthalene	35	U	40	35	ug/Kg	☼	02/01/24 14:27	02/02/24 14:10	50
1,2,4-Trimethylbenzene	9.3	U	40	9.3	ug/Kg	☼	02/01/24 14:27	02/02/24 14:10	50
1,3,5-Trimethylbenzene	10	U	40	10	ug/Kg	☼	02/01/24 14:27	02/02/24 14:10	50
Isopropylbenzene	13	U	40	13	ug/Kg	☼	02/01/24 14:27	02/02/24 14:10	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*68 - 150*	*02/01/24 14:27*	*02/02/24 14:10*	*50*
Toluene-d8 (Surr)	*102*		*73 - 147*	*02/01/24 14:27*	*02/02/24 14:10*	*50*
Bromofluorobenzene	*107*		*70 - 141*	*02/01/24 14:27*	*02/02/24 14:10*	*50*
Dibromofluoromethane (Surr)	*97*		*68 - 142*	*02/01/24 14:27*	*02/02/24 14:10*	*50*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**2.1**		1.0	1.0	%			02/01/24 17:53	1
Percent Solids (EPA Moisture)	**97.9**		1.0	1.0	%			02/01/24 17:53	1

Client Sample ID: 002-2

Lab Sample ID: 460-297275-5

Date Collected: 01/26/24 11:08
Matrix: Solid
Date Received: 01/30/24 19:00
Percent Solids: 98.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**37**	**J**	38	7.8	ug/Kg	☼	02/01/24 14:28	02/02/24 14:35	50
Toluene	**220**		38	9.6	ug/Kg	☼	02/01/24 14:28	02/02/24 14:35	50
Ethylbenzene	12	U	38	12	ug/Kg	☼	02/01/24 14:28	02/02/24 14:35	50
Xylenes, Total	**57**	**J**	77	11	ug/Kg	☼	02/01/24 14:28	02/02/24 14:35	50
MTBE	8.2	U	38	8.2	ug/Kg	☼	02/01/24 14:28	02/02/24 14:35	50
Naphthalene	34	U	38	34	ug/Kg	☼	02/01/24 14:28	02/02/24 14:35	50
1,2,4-Trimethylbenzene	8.9	U	38	8.9	ug/Kg	☼	02/01/24 14:28	02/02/24 14:35	50
1,3,5-Trimethylbenzene	9.6	U	38	9.6	ug/Kg	☼	02/01/24 14:28	02/02/24 14:35	50
Isopropylbenzene	12	U	38	12	ug/Kg	☼	02/01/24 14:28	02/02/24 14:35	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*68 - 150*	*02/01/24 14:28*	*02/02/24 14:35*	*50*
Toluene-d8 (Surr)	*99*		*73 - 147*	*02/01/24 14:28*	*02/02/24 14:35*	*50*
Bromofluorobenzene	*105*		*70 - 141*	*02/01/24 14:28*	*02/02/24 14:35*	*50*
Dibromofluoromethane (Surr)	*101*		*68 - 142*	*02/01/24 14:28*	*02/02/24 14:35*	*50*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**1.9**		1.0	1.0	%			02/01/24 17:53	1
Percent Solids (EPA Moisture)	**98.1**		1.0	1.0	%			02/01/24 17:53	1

Client Sample ID: 002-3

Lab Sample ID: 460-297275-6

Date Collected: 01/26/24 11:39
Matrix: Solid
Date Received: 01/30/24 19:00
Percent Solids: 98.8

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**63**		41	8.4	ug/Kg	☼	02/01/24 14:29	02/02/24 15:00	50
Toluene	**200**		41	10	ug/Kg	☼	02/01/24 14:29	02/02/24 15:00	50
Ethylbenzene	**37**	**J**	41	12	ug/Kg	☼	02/01/24 14:29	02/02/24 15:00	50
Xylenes, Total	**140**		83	12	ug/Kg	☼	02/01/24 14:29	02/02/24 15:00	50
MTBE	8.9	U	41	8.9	ug/Kg	☼	02/01/24 14:29	02/02/24 15:00	50
Naphthalene	36	U	41	36	ug/Kg	☼	02/01/24 14:29	02/02/24 15:00	50
1,2,4-Trimethylbenzene	**29**	**J**	41	9.5	ug/Kg	☼	02/01/24 14:29	02/02/24 15:00	50
1,3,5-Trimethylbenzene	**14**	**J**	41	10	ug/Kg	☼	02/01/24 14:29	02/02/24 15:00	50
Isopropylbenzene	13	U	41	13	ug/Kg	☼	02/01/24 14:29	02/02/24 15:00	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*79*		*68 - 150*	*02/01/24 14:29*	*02/02/24 15:00*	*50*
Toluene-d8 (Surr)	*81*		*73 - 147*	*02/01/24 14:29*	*02/02/24 15:00*	*50*
Bromofluorobenzene	*83*		*70 - 141*	*02/01/24 14:29*	*02/02/24 15:00*	*50*
Dibromofluoromethane (Surr)	*79*		*68 - 142*	*02/01/24 14:29*	*02/02/24 15:00*	*50*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**1.2**		1.0	1.0	%			02/01/24 17:53	1
Percent Solids (EPA Moisture)	**98.8**		1.0	1.0	%			02/01/24 17:53	1

Client: Marshall Geoscience
Project/Site: 019333

Job ID: 460-297275-1

Client Sample ID: 003-1

Lab Sample ID: 460-297275-7

Date Collected: 01/25/24 12:40
Matrix: Solid
Date Received: 01/30/24 19:00
Percent Solids: 98.3

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**11**	**J**	42	8.5	ug/Kg	☼	02/01/24 14:29	02/02/24 15:25	50
Toluene	**51**		42	11	ug/Kg	☼	02/01/24 14:29	02/02/24 15:25	50
Ethylbenzene	13	U	42	13	ug/Kg	☼	02/01/24 14:29	02/02/24 15:25	50
Xylenes, Total	12	U	84	12	ug/Kg	☼	02/01/24 14:29	02/02/24 15:25	50
MTBE	9.0	U	42	9.0	ug/Kg	☼	02/01/24 14:29	02/02/24 15:25	50
Naphthalene	37	U	42	37	ug/Kg	☼	02/01/24 14:29	02/02/24 15:25	50
1,2,4-Trimethylbenzene	9.7	U	42	9.7	ug/Kg	☼	02/01/24 14:29	02/02/24 15:25	50
1,3,5-Trimethylbenzene	11	U	42	11	ug/Kg	☼	02/01/24 14:29	02/02/24 15:25	50
Isopropylbenzene	13	U	42	13	ug/Kg	☼	02/01/24 14:29	02/02/24 15:25	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*68 - 150*	*02/01/24 14:29*	*02/02/24 15:25*	*50*
Toluene-d8 (Surr)	*95*		*73 - 147*	*02/01/24 14:29*	*02/02/24 15:25*	*50*
Bromofluorobenzene	*102*		*70 - 141*	*02/01/24 14:29*	*02/02/24 15:25*	*50*
Dibromofluoromethane (Surr)	*93*		*68 - 142*	*02/01/24 14:29*	*02/02/24 15:25*	*50*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**1.7**		1.0	1.0	%			02/01/24 17:53	1
Percent Solids (EPA Moisture)	**98.3**		1.0	1.0	%			02/01/24 17:53	1

Client Sample ID: 003-2

Lab Sample ID: 460-297275-8

Date Collected: 01/25/24 12:46
Matrix: Solid
Date Received: 01/30/24 19:00
Percent Solids: 98.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**12**	**J**	40	8.1	ug/Kg	☼	02/01/24 14:30	02/02/24 15:50	50
Toluene	**32**	**J**	40	10	ug/Kg	☼	02/01/24 14:30	02/02/24 15:50	50
Ethylbenzene	12	U	40	12	ug/Kg	☼	02/01/24 14:30	02/02/24 15:50	50
Xylenes, Total	11	U	81	11	ug/Kg	☼	02/01/24 14:30	02/02/24 15:50	50
MTBE	8.6	U	40	8.6	ug/Kg	☼	02/01/24 14:30	02/02/24 15:50	50
Naphthalene	35	U	40	35	ug/Kg	☼	02/01/24 14:30	02/02/24 15:50	50
1,2,4-Trimethylbenzene	9.3	U	40	9.3	ug/Kg	☼	02/01/24 14:30	02/02/24 15:50	50
1,3,5-Trimethylbenzene	10	U	40	10	ug/Kg	☼	02/01/24 14:30	02/02/24 15:50	50
Isopropylbenzene	13	U	40	13	ug/Kg	☼	02/01/24 14:30	02/02/24 15:50	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*68 - 150*	*02/01/24 14:30*	*02/02/24 15:50*	*50*
Toluene-d8 (Surr)	*96*		*73 - 147*	*02/01/24 14:30*	*02/02/24 15:50*	*50*
Bromofluorobenzene	*98*		*70 - 141*	*02/01/24 14:30*	*02/02/24 15:50*	*50*
Dibromofluoromethane (Surr)	*87*		*68 - 142*	*02/01/24 14:30*	*02/02/24 15:50*	*50*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**1.5**		1.0	1.0	%			02/01/24 17:53	1
Percent Solids (EPA Moisture)	**98.5**		1.0	1.0	%			02/01/24 17:53	1

Client Sample ID: 003-3

Lab Sample ID: 460-297275-9

Date Collected: 01/29/24 09:48

Matrix: Solid

Date Received: 01/30/24 19:00

Percent Solids: 98.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**66000**		2000	400	ug/Kg	☼	02/01/24 14:30	02/05/24 15:28	2500
Toluene	**640000**		2000	500	ug/Kg	☼	02/01/24 14:30	02/05/24 15:28	2500
Ethylbenzene	**120000**		2000	600	ug/Kg	☼	02/01/24 14:30	02/05/24 15:28	2500
Xylenes, Total	**790000**		4000	560	ug/Kg	☼	02/01/24 14:30	02/05/24 15:28	2500
MTBE	420	U	2000	420	ug/Kg	☼	02/01/24 14:30	02/05/24 15:28	2500
Naphthalene	**11000**		2000	1700	ug/Kg	☼	02/01/24 14:30	02/05/24 15:28	2500
1,2,4-Trimethylbenzene	**210000**		2000	460	ug/Kg	☼	02/01/24 14:30	02/05/24 15:28	2500
1,3,5-Trimethylbenzene	**55000**		2000	500	ug/Kg	☼	02/01/24 14:30	02/05/24 15:28	2500
Isopropylbenzene	**10000**		2000	630	ug/Kg	☼	02/01/24 14:30	02/05/24 15:28	2500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*0*	*D*	*68 - 150*	*02/01/24 14:30*	*02/05/24 15:28*	*2500*
Toluene-d8 (Surr)	*0*	*D*	*73 - 147*	*02/01/24 14:30*	*02/05/24 15:28*	*2500*
Bromofluorobenzene	*0*	*D*	*70 - 141*	*02/01/24 14:30*	*02/05/24 15:28*	*2500*
Dibromofluoromethane (Surr)	*0*	*D*	*68 - 142*	*02/01/24 14:30*	*02/05/24 15:28*	*2500*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**1.6**		1.0	1.0	%			02/01/24 17:53	1
Percent Solids (EPA Moisture)	**98.4**		1.0	1.0	%			02/01/24 17:53	1

Client Sample ID: BF-1

Lab Sample ID: 460-297275-10

Date Collected: 01/26/24 11:55

Matrix: Solid

Date Received: 01/30/24 19:00

Percent Solids: 83.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	9.9	U	49	9.9	ug/Kg	☼	02/01/24 14:31	02/03/24 10:41	50
Toluene	**27**	**J *-**	49	12	ug/Kg	☼	02/01/24 14:31	02/03/24 10:41	50
Ethylbenzene	15	U	49	15	ug/Kg	☼	02/01/24 14:31	02/03/24 10:41	50
Xylenes, Total	14	U	98	14	ug/Kg	☼	02/01/24 14:31	02/03/24 10:41	50
MTBE	10	U	49	10	ug/Kg	☼	02/01/24 14:31	02/03/24 10:41	50
Naphthalene	43	U	49	43	ug/Kg	☼	02/01/24 14:31	02/03/24 10:41	50
1,2,4-Trimethylbenzene	11	U	49	11	ug/Kg	☼	02/01/24 14:31	02/03/24 10:41	50
1,3,5-Trimethylbenzene	12	U	49	12	ug/Kg	☼	02/01/24 14:31	02/03/24 10:41	50
Isopropylbenzene	16	U	49	16	ug/Kg	☼	02/01/24 14:31	02/03/24 10:41	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*68 - 150*	*02/01/24 14:31*	*02/03/24 10:41*	*50*
Toluene-d8 (Surr)	*120*		*73 - 147*	*02/01/24 14:31*	*02/03/24 10:41*	*50*
Bromofluorobenzene	*128*		*70 - 141*	*02/01/24 14:31*	*02/03/24 10:41*	*50*
Dibromofluoromethane (Surr)	*119*		*68 - 142*	*02/01/24 14:31*	*02/03/24 10:41*	*50*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**16.1**		1.0	1.0	%			02/01/24 17:53	1
Percent Solids (EPA Moisture)	**83.9**		1.0	1.0	%			02/01/24 17:53	1

Client Sample ID: 001-1 — **Lab Sample ID: 460-297275-1**
Date Collected: 01/26/24 12:17 — **Matrix: Solid**
Date Received: 01/30/24 19:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	957517	CJC	EET EDI	02/01/24 17:53

Client Sample ID: 001-1 — **Lab Sample ID: 460-297275-1**
Date Collected: 01/26/24 12:17 — **Matrix: Solid**
Date Received: 01/30/24 19:00 — **Percent Solids: 99.1**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			957480	AAT	EET EDI	02/01/24 14:26
Total/NA	Analysis	8260D		50	957587	AAT	EET EDI	02/02/24 12:55

Client Sample ID: 001-2 — **Lab Sample ID: 460-297275-2**
Date Collected: 01/26/24 12:22 — **Matrix: Solid**
Date Received: 01/30/24 19:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	957517	CJC	EET EDI	02/01/24 17:53

Client Sample ID: 001-2 — **Lab Sample ID: 460-297275-2**
Date Collected: 01/26/24 12:22 — **Matrix: Solid**
Date Received: 01/30/24 19:00 — **Percent Solids: 99.0**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			957480	AAT	EET EDI	02/01/24 14:26
Total/NA	Analysis	8260D		50	957587	AAT	EET EDI	02/02/24 13:20

Client Sample ID: 001-3 — **Lab Sample ID: 460-297275-3**
Date Collected: 01/26/24 12:29 — **Matrix: Solid**
Date Received: 01/30/24 19:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	957517	CJC	EET EDI	02/01/24 17:53

Client Sample ID: 001-3 — **Lab Sample ID: 460-297275-3**
Date Collected: 01/26/24 12:29 — **Matrix: Solid**
Date Received: 01/30/24 19:00 — **Percent Solids: 98.7**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			957480	AAT	EET EDI	02/01/24 14:27
Total/NA	Analysis	8260D		50	957587	AAT	EET EDI	02/02/24 13:45

Client Sample ID: 002-1 — **Lab Sample ID: 460-297275-4**
Date Collected: 01/26/24 11:01 — **Matrix: Solid**
Date Received: 01/30/24 19:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	957517	CJC	EET EDI	02/01/24 17:53

Lab Chronicle

Client: Marshall Geoscience
Project/Site: 019333

Job ID: 460-297275-1

Client Sample ID: 002-1
Lab Sample ID: 460-297275-4
Date Collected: 01/26/24 11:01
Matrix: Solid
Date Received: 01/30/24 19:00
Percent Solids: 97.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			957480	AAT	EET EDI	02/01/24 14:27
Total/NA	Analysis	8260D		50	957587	AAT	EET EDI	02/02/24 14:10

Client Sample ID: 002-2
Lab Sample ID: 460-297275-5
Date Collected: 01/26/24 11:08
Matrix: Solid
Date Received: 01/30/24 19:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	957517	CJC	EET EDI	02/01/24 17:53

Client Sample ID: 002-2
Lab Sample ID: 460-297275-5
Date Collected: 01/26/24 11:08
Matrix: Solid
Date Received: 01/30/24 19:00
Percent Solids: 98.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			957480	AAT	EET EDI	02/01/24 14:28
Total/NA	Analysis	8260D		50	957587	AAT	EET EDI	02/02/24 14:35

Client Sample ID: 002-3
Lab Sample ID: 460-297275-6
Date Collected: 01/26/24 11:39
Matrix: Solid
Date Received: 01/30/24 19:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	957517	CJC	EET EDI	02/01/24 17:53

Client Sample ID: 002-3
Lab Sample ID: 460-297275-6
Date Collected: 01/26/24 11:39
Matrix: Solid
Date Received: 01/30/24 19:00
Percent Solids: 98.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			957480	AAT	EET EDI	02/01/24 14:29
Total/NA	Analysis	8260D		50	957587	AAT	EET EDI	02/02/24 15:00

Client Sample ID: 003-1
Lab Sample ID: 460-297275-7
Date Collected: 01/25/24 12:40
Matrix: Solid
Date Received: 01/30/24 19:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	957517	CJC	EET EDI	02/01/24 17:53

Lab Chronicle

Client: Marshall Geoscience
Project/Site: 019333

Job ID: 460-297275-1

Client Sample ID: 003-1
Lab Sample ID: 460-297275-7
Date Collected: 01/25/24 12:40
Matrix: Solid
Date Received: 01/30/24 19:00
Percent Solids: 98.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			957480	AAT	EET EDI	02/01/24 14:29
Total/NA	Analysis	8260D		50	957587	AAT	EET EDI	02/02/24 15:25

Client Sample ID: 003-2
Lab Sample ID: 460-297275-8
Date Collected: 01/25/24 12:46
Matrix: Solid
Date Received: 01/30/24 19:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	957517	CJC	EET EDI	02/01/24 17:53

Client Sample ID: 003-2
Lab Sample ID: 460-297275-8
Date Collected: 01/25/24 12:46
Matrix: Solid
Date Received: 01/30/24 19:00
Percent Solids: 98.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			957480	AAT	EET EDI	02/01/24 14:30
Total/NA	Analysis	8260D		50	957587	AAT	EET EDI	02/02/24 15:50

Client Sample ID: 003-3
Lab Sample ID: 460-297275-9
Date Collected: 01/29/24 09:48
Matrix: Solid
Date Received: 01/30/24 19:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	957517	CJC	EET EDI	02/01/24 17:53

Client Sample ID: 003-3
Lab Sample ID: 460-297275-9
Date Collected: 01/29/24 09:48
Matrix: Solid
Date Received: 01/30/24 19:00
Percent Solids: 98.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			957480	AAT	EET EDI	02/01/24 14:30
Total/NA	Analysis	8260D		2500	957911	VZD	EET EDI	02/05/24 15:28

Client Sample ID: BF-1
Lab Sample ID: 460-297275-10
Date Collected: 01/26/24 11:55
Matrix: Solid
Date Received: 01/30/24 19:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	957517	CJC	EET EDI	02/01/24 17:53

Lab Chronicle

Client: Marshall Geoscience
Project/Site: 019333

Job ID: 460-297275-1

Client Sample ID: BF-1
Date Collected: 01/26/24 11:55
Date Received: 01/30/24 19:00

Lab Sample ID: 460-297275-10
Matrix: Solid
Percent Solids: 83.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			957480	AAT	EET EDI	02/01/24 14:31
Total/NA	Analysis	8260D		50	957750	AAT	EET EDI	02/03/24 10:41

Laboratory References:

EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Accreditation/Certification Summary

Client: Marshall Geoscience
Project/Site: 019333

Job ID: 460-297275-1

Laboratory: Eurofins Edison

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	68-00522	02-29-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Marshall Geoscience
Project/Site: 019333

Job ID: 460-297275-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET EDI
Moisture	Percent Moisture	EPA	EET EDI
5035	Closed System Purge and Trap	SW846	EET EDI

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: Marshall Geoscience
Project/Site: 019333

Job ID: 460-297275-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-297275-1	001-1	Solid	01/26/24 12:17	01/30/24 19:00
460-297275-2	001-2	Solid	01/26/24 12:22	01/30/24 19:00
460-297275-3	001-3	Solid	01/26/24 12:29	01/30/24 19:00
460-297275-4	002-1	Solid	01/26/24 11:01	01/30/24 19:00
460-297275-5	002-2	Solid	01/26/24 11:08	01/30/24 19:00
460-297275-6	002-3	Solid	01/26/24 11:39	01/30/24 19:00
460-297275-7	003-1	Solid	01/25/24 12:40	01/30/24 19:00
460-297275-8	003-2	Solid	01/25/24 12:46	01/30/24 19:00
460-297275-9	003-3	Solid	01/29/24 09:48	01/30/24 19:00
460-297275-10	BF-1	Solid	01/26/24 11:55	01/30/24 19:00

Chain of Custody Record

659085

eurofins | Environment Testing America

Address. _____

Regulatory Program ☐ DW ☐ NPDES ☐ RCRA ☒ Other PADEP

TAL-8210

Client Contact	Project Manager: GIL MARSHALL	Site Contact: GIL MARSHALL	Date:	COC No:
Company Name: MARSHALL GEOSCIENCE	Tel/Email: 610-454-1172	Lab Contact: JILL MILLER	Carrier:	1 of 1 COCs
Address: 170 1ST AVENUE	Analysis Turnaround Time			Sampler:
City/State/Zip: COLLEGEVILLE, PA 19426	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 610-454-1172	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: 019333	☐ 1 week			Job / SDG No: 297775
Site: 019333	☐ 2 days			
P O # 019333	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	PADEP LIST SHEET	UNLEADED GASOLINE	Sample Specific Notes:
001-1	1/26/24	1217	G	SOIL	2				X	1
001-2	1/26/24	1222	G	SOIL	2				X	2
001-3	1/26/24	1229	G	SOIL	2				X	3
002-1	1/26/24	1101	G	SOIL	2				X	4
002-2	1/26/24	1108	G	SOIL	2				X	5
002-3	1/26/24	1139	G	SOIL	2				X	6
003-1	1/25/24	1240	G	SOIL	2				X	7
003-2	1/25/24	1246	G	SOIL	2				X	8
003-3	1/29/24	0948	G	SOIL	2				X	9
										10

460-297275 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No. | Cooler Temp. (°C): Obs'd: _____ Corr'd. _____ | Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Gil Marshall				EETN-KOP	1/30/24 738
Relinquished by:	Company: EETN-KOP	Date/Time: 1-30-24 45	Received by:	Company: ETA	Date/Time: 1/30
Relinquished by:	Company: ETA	Date/Time: 1/30 1900	Received in Laboratory by:	Company:	Date/Time: 1/30/24 1907

2/9/2024

Eurofins **TestAmerica Edison**
Receipt Temperature and pH Log

Job Number 29775

Number of Coolers: 1 IR Gun #: 2

Cooler Temperatures

Cooler #1:	3.1 °C	3.1 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other

If pH adjustments are required record the information below

Sample No(s). adjusted _____

Preservative Name/Conc. _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

*Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.

Initials: HD **Date:** 1/30

Login Sample Receipt Checklist

Client: Marshall Geoscience

Job Number: 460-297275-1

Login Number: 297275

List Source: Eurofins Edison

List Number: 1

Creator: Rivera, Kenneth

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received extra samples not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX C

ALS Laboratory Soil Analytical Data – August 2024

Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 | Fax: 717-944-1430 |

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343, NJ PA101

Analytical Results Report For **Synergy Environmental, Inc.**

Project Gatz Auto 24-01483
Workorder 3374336
Report ID 348337 on 8/22/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Aug 16, 2024.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Jessica Smith (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):
Synergy Environmental, Inc. - Synergy Environmental, Inc.
Ben Andes - Synergy Environmental,Inc.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Jessica Smith

Jessica Smith *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3374336001	24-SB1	Solid	08/16/2024 08:50	08/16/2024 19:10	RH	Synergy Environmental, Inc.
3374336002	24-SB2	Solid	08/16/2024 09:20	08/16/2024 19:10	RH	Synergy Environmental, Inc.
3374336003	24-SB3	Solid	08/16/2024 09:45	08/16/2024 19:10	RH	Synergy Environmental, Inc.
3374336004	24-SB4	Solid	08/16/2024 10:05	08/16/2024 19:10	RH	Synergy Environmental, Inc.
3374336005	24-SB5	Solid	08/16/2024 10:40	08/16/2024 19:10	RH	Synergy Environmental, Inc.
3374336006	24-SB6	Solid	08/16/2024 11:00	08/16/2024 19:10	RH	Synergy Environmental, Inc.

Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:
  EPA 300.1 Rev. 1.0-1997
  EPA 300.0 Rev. 2.1-1993
  EPA 353.2 Rev. 2.0-1993
  EPA 410.4 Rev. 1.0-1993
  EPA 420.4 Rev. 1.0-1993
  EPA 365.1 Rev. 2.0-1993
  EPA 200.7 Rev. 4.4-1994
  EPA 200.8 Rev. 5.4-1994
  EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.

Detected Results Summary

Client Sample ID	24-SB1	Collected	08/16/2024 08:50
Lab Sample ID	3374336001	Lab Receipt	08/16/2024 19:10

Compound	Result	Units	RDL	Method	Flag
VOLATILE ORGANICS					
1,2,4-Trimethylbenzene	214000	ug/kg	1130	SW846 8260B	#
1,3,5-Trimethylbenzene	57700	ug/kg	1130	SW846 8260B	#
Benzene	5560	ug/kg	283	SW846 8260B	#
Ethylbenzene	70500	ug/kg	1130	SW846 8260B	#
Isopropylbenzene	9760	ug/kg	283	SW846 8260B	#
Naphthalene	7930	ug/kg	565	SW846 8260B	#
Toluene	183000	ug/kg	1130	SW846 8260B	#
Total Xylenes	535000	ug/kg	3390	SW846 8260B	#
WET CHEMISTRY					
Moisture	7.4	%	0.1	S2540G-15	#
Total Solids	92.6	%	0.1	S2540G-15	#

Detected Results Summary

Client Sample ID	24-SB2	Collected	08/16/2024 09:20
Lab Sample ID	3374336002	Lab Receipt	08/16/2024 19:10

Compound	Result	Units	RDL	Method	Flag
VOLATILE ORGANICS					
1,2,4-Trimethylbenzene	307	ug/kg	61.3	SW846 8260B	#
1,3,5-Trimethylbenzene	79.1	ug/kg	61.3	SW846 8260B	#
Benzene	444	ug/kg	61.3	SW846 8260B	#
Ethylbenzene	164	ug/kg	61.3	SW846 8260B	#
Toluene	836	ug/kg	61.3	SW846 8260B	#
Total Xylenes	969	ug/kg	184	SW846 8260B	#
WET CHEMISTRY					
Moisture	15.9	%	0.1	S2540G-15	#
Total Solids	84.1	%	0.1	S2540G-15	#

Detected Results Summary

Client Sample ID	24-SB3	Collected	08/16/2024 09:45
Lab Sample ID	3374336003	Lab Receipt	08/16/2024 19:10

Compound	Result	Units	RDL	Method	Flag
VOLATILE ORGANICS					
1,2,4-Trimethylbenzene	267	ug/kg	58.8	SW846 8260B	#
1,3,5-Trimethylbenzene	106	ug/kg	58.8	SW846 8260B	#
WET CHEMISTRY					
Moisture	11.1	%	0.1	S2540G-15	#
Total Solids	88.9	%	0.1	S2540G-15	#

Detected Results Summary

Client Sample ID	24-SB4	Collected	08/16/2024 10:05
Lab Sample ID	3374336004	Lab Receipt	08/16/2024 19:10

Compound	Result	Units	RDL	Method	Flag
VOLATILE ORGANICS					
1,2,4-Trimethylbenzene	96.6	ug/kg	63.4	SW846 8260B	#
WET CHEMISTRY					
Moisture	13.3	%	0.1	S2540G-15	#
Total Solids	86.7	%	0.1	S2540G-15	#

Detected Results Summary

Client Sample ID	24-SB5	Collected	08/16/2024 10:40
Lab Sample ID	3374336005	Lab Receipt	08/16/2024 19:10

Compound	Result	Units	RDL	Method	Flag
VOLATILE ORGANICS					
Toluene	89.1	ug/kg	75.8	SW846 8260B	#
WET CHEMISTRY					
Moisture	10.8	%	0.1	S2540G-15	#
Total Solids	89.2	%	0.1	S2540G-15	#

Detected Results Summary

Client Sample ID	24-SB6	Collected	08/16/2024 11:00
Lab Sample ID	3374336006	Lab Receipt	08/16/2024 19:10

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
Moisture	10.2	%	0.1	S2540G-15	#
Total Solids	89.8	%	0.1	S2540G-15	#

Results

Client Sample ID	24-SB1	Collected	08/16/2024 08:50
Lab Sample ID	3374336001	Lab Receipt	08/16/2024 19:10

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	214000		ug/kg	1130	SW846 8260B	1000	08/21/2024 12:03	JTH	A
1,3,5-Trimethylbenzene	57700		ug/kg	1130	SW846 8260B	1000	08/21/2024 12:03	JTH	A
Benzene	5560		ug/kg	283	SW846 8260B	250	08/19/2024 16:47	TMP	A
Ethylbenzene	70500		ug/kg	1130	SW846 8260B	1000	08/21/2024 12:03	JTH	A
Isopropylbenzene	9760		ug/kg	283	SW846 8260B	250	08/19/2024 16:47	TMP	A
Methyl t-Butyl Ether	ND	ND	ug/kg	283	SW846 8260B	250	08/19/2024 16:47	TMP	A
Naphthalene	7930		ug/kg	565	SW846 8260B	250	08/19/2024 16:47	TMP	A
Toluene	183000		ug/kg	1130	SW846 8260B	1000	08/21/2024 12:03	JTH	A
Total Xylenes	535000		ug/kg	3390	SW846 8260B	1000	08/21/2024 12:03	JTH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.2%	71 – 146	08/21/2024 12:03	
1,2-Dichloroethane-d4	17060-07-0	94.3%	71 – 146	08/19/2024 16:47	
4-Bromofluorobenzene	460-00-4	98.9%	46 – 138	08/21/2024 12:03	
4-Bromofluorobenzene	460-00-4	93.7%	46 – 138	08/19/2024 16:47	
Dibromofluoromethane	1868-53-7	93.3%	42 – 143	08/21/2024 12:03	
Dibromofluoromethane	1868-53-7	82.7%	42 – 143	08/19/2024 16:47	
Toluene-d8	2037-26-5	99.7%	54 – 141	08/21/2024 12:03	
Toluene-d8	2037-26-5	95.7%	54 – 141	08/19/2024 16:47	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	7.4		%	0.1	S2540G-15	1	08/17/2024 13:35	J1K	B
Total Solids	92.6		%	0.1	S2540G-15	1	08/17/2024 13:35	J1K	B

Results

Client Sample ID	24-SB2	Collected	08/16/2024 09:20
Lab Sample ID	3374336002	Lab Receipt	08/16/2024 19:10

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	307		ug/kg	61.3	SW846 8260B	50	08/21/2024 13:23	JTH	A
1,3,5-Trimethylbenzene	79.1		ug/kg	61.3	SW846 8260B	50	08/21/2024 13:23	JTH	A
Benzene	444		ug/kg	61.3	SW846 8260B	50	08/21/2024 13:23	JTH	A
Ethylbenzene	164		ug/kg	61.3	SW846 8260B	50	08/21/2024 13:23	JTH	A
Isopropylbenzene	ND	ND	ug/kg	61.3	SW846 8260B	50	08/21/2024 13:23	JTH	A
Methyl t-Butyl Ether	ND	ND	ug/kg	61.3	SW846 8260B	50	08/21/2024 13:23	JTH	A
Naphthalene	ND	ND	ug/kg	123	SW846 8260B	50	08/21/2024 13:23	JTH	A
Toluene	836		ug/kg	61.3	SW846 8260B	50	08/21/2024 13:23	JTH	A
Total Xylenes	969		ug/kg	184	SW846 8260B	50	08/21/2024 13:23	JTH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	71 – 146	08/21/2024 13:23	
4-Bromofluorobenzene	460-00-4	96.9%	46 – 138	08/21/2024 13:23	
Dibromofluoromethane	1868-53-7	95.6%	42 – 143	08/21/2024 13:23	
Toluene-d8	2037-26-5	101%	54 – 141	08/21/2024 13:23	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	15.9		%	0.1	S2540G-15	1	08/17/2024 13:35	J1K	B
Total Solids	84.1		%	0.1	S2540G-15	1	08/17/2024 13:35	J1K	B

Results

Client Sample ID	24-SB3	Collected	08/16/2024 09:45
Lab Sample ID	3374336003	Lab Receipt	08/16/2024 19:10

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	267		ug/kg	58.8	SW846 8260B	50	08/19/2024 17:28	TMP	A
1,3,5-Trimethylbenzene	106		ug/kg	58.8	SW846 8260B	50	08/19/2024 17:28	TMP	A
Benzene	ND	ND	ug/kg	58.8	SW846 8260B	50	08/19/2024 17:28	TMP	A
Ethylbenzene	ND	ND	ug/kg	58.8	SW846 8260B	50	08/19/2024 17:28	TMP	A
Isopropylbenzene	ND	ND	ug/kg	58.8	SW846 8260B	50	08/19/2024 17:28	TMP	A
Methyl t-Butyl Ether	ND	ND	ug/kg	58.8	SW846 8260B	50	08/19/2024 17:28	TMP	A
Naphthalene	ND	ND	ug/kg	118	SW846 8260B	50	08/19/2024 17:28	TMP	A
Toluene	ND	ND	ug/kg	58.8	SW846 8260B	50	08/19/2024 17:28	TMP	A
Total Xylenes	ND	ND	ug/kg	176	SW846 8260B	50	08/19/2024 17:28	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	102%	71 – 146	08/19/2024 17:28	
4-Bromofluorobenzene	460-00-4	99%	46 – 138	08/19/2024 17:28	
Dibromofluoromethane	1868-53-7	85.6%	42 – 143	08/19/2024 17:28	
Toluene-d8	2037-26-5	106%	54 – 141	08/19/2024 17:28	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	11.1		%	0.1	S2540G-15	1	08/17/2024 13:35	J1K	B
Total Solids	88.9		%	0.1	S2540G-15	1	08/17/2024 13:35	J1K	B

Results

Client Sample ID	24-SB4	Collected	08/16/2024 10:05
Lab Sample ID	3374336004	Lab Receipt	08/16/2024 19:10

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	96.6		ug/kg	63.4	SW846 8260B	50	08/19/2024 17:48	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/kg	63.4	SW846 8260B	50	08/19/2024 17:48	TMP	A
Benzene	ND	ND	ug/kg	63.4	SW846 8260B	50	08/19/2024 17:48	TMP	A
Ethylbenzene	ND	ND	ug/kg	63.4	SW846 8260B	50	08/19/2024 17:48	TMP	A
Isopropylbenzene	ND	ND	ug/kg	63.4	SW846 8260B	50	08/19/2024 17:48	TMP	A
Methyl t-Butyl Ether	ND	ND	ug/kg	63.4	SW846 8260B	50	08/19/2024 17:48	TMP	A
Naphthalene	ND	ND	ug/kg	127	SW846 8260B	50	08/19/2024 17:48	TMP	A
Toluene	ND	ND	ug/kg	63.4	SW846 8260B	50	08/19/2024 17:48	TMP	A
Total Xylenes	ND	ND	ug/kg	190	SW846 8260B	50	08/19/2024 17:48	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	71 – 146	08/19/2024 17:48	
4-Bromofluorobenzene	460-00-4	101%	46 – 138	08/19/2024 17:48	
Dibromofluoromethane	1868-53-7	86%	42 – 143	08/19/2024 17:48	
Toluene-d8	2037-26-5	107%	54 – 141	08/19/2024 17:48	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	13.3		%	0.1	S2540G-15	1	08/17/2024 13:35	J1K	B
Total Solids	86.7		%	0.1	S2540G-15	1	08/17/2024 13:35	J1K	B

Results

Client Sample ID	24-SB5	Collected	08/16/2024 10:40
Lab Sample ID	3374336005	Lab Receipt	08/16/2024 19:10

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/kg	75.8	SW846 8260B	50	08/19/2024 18:08	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/kg	75.8	SW846 8260B	50	08/19/2024 18:08	TMP	A
Benzene	ND	ND	ug/kg	75.8	SW846 8260B	50	08/19/2024 18:08	TMP	A
Ethylbenzene	ND	ND	ug/kg	75.8	SW846 8260B	50	08/19/2024 18:08	TMP	A
Isopropylbenzene	ND	ND	ug/kg	75.8	SW846 8260B	50	08/19/2024 18:08	TMP	A
Methyl t-Butyl Ether	ND	ND	ug/kg	75.8	SW846 8260B	50	08/19/2024 18:08	TMP	A
Naphthalene	ND	ND	ug/kg	152	SW846 8260B	50	08/19/2024 18:08	TMP	A
Toluene	89.1		ug/kg	75.8	SW846 8260B	50	08/19/2024 18:08	TMP	A
Total Xylenes	ND	ND	ug/kg	227	SW846 8260B	50	08/19/2024 18:08	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	99.2%	71 – 146	08/19/2024 18:08	
4-Bromofluorobenzene	460-00-4	101%	46 – 138	08/19/2024 18:08	
Dibromofluoromethane	1868-53-7	84.9%	42 – 143	08/19/2024 18:08	
Toluene-d8	2037-26-5	105%	54 – 141	08/19/2024 18:08	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	10.8		%	0.1	S2540G-15	1	08/17/2024 13:35	J1K	B
Total Solids	89.2		%	0.1	S2540G-15	1	08/17/2024 13:35	J1K	B

Results

Client Sample ID	24-SB6	Collected	08/16/2024 11:00
Lab Sample ID	3374336006	Lab Receipt	08/16/2024 19:10

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/kg	47.1	SW846 8260B	50	08/19/2024 18:29	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/kg	47.1	SW846 8260B	50	08/19/2024 18:29	TMP	A
Benzene	ND	ND	ug/kg	47.1	SW846 8260B	50	08/19/2024 18:29	TMP	A
Ethylbenzene	ND	ND	ug/kg	47.1	SW846 8260B	50	08/19/2024 18:29	TMP	A
Isopropylbenzene	ND	ND	ug/kg	47.1	SW846 8260B	50	08/19/2024 18:29	TMP	A
Methyl t-Butyl Ether	ND	ND	ug/kg	47.1	SW846 8260B	50	08/19/2024 18:29	TMP	A
Naphthalene	ND	ND	ug/kg	94.3	SW846 8260B	50	08/19/2024 18:29	TMP	A
Toluene	ND	ND	ug/kg	47.1	SW846 8260B	50	08/19/2024 18:29	TMP	A
Total Xylenes	ND	ND	ug/kg	141	SW846 8260B	50	08/19/2024 18:29	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	102%	71 – 146	08/19/2024 18:29	
4-Bromofluorobenzene	460-00-4	104%	46 – 138	08/19/2024 18:29	
Dibromofluoromethane	1868-53-7	84.6%	42 – 143	08/19/2024 18:29	
Toluene-d8	2037-26-5	106%	54 – 141	08/19/2024 18:29	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	10.2		%	0.1	S2540G-15	1	08/17/2024 13:35	J1K	B
Total Solids	89.8		%	0.1	S2540G-15	1	08/17/2024 13:35	J1K	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3374336001	24-SB1	SW846 8260B	SW846 5035A	
		SW846 8260B	SW846 5035A	
		S2540G-15	N/A	
3374336002	24-SB2	SW846 8260B	SW846 5035A	
		S2540G-15	N/A	
3374336003	24-SB3	SW846 8260B	SW846 5035A	
		S2540G-15	N/A	
3374336004	24-SB4	SW846 8260B	SW846 5035A	
		S2540G-15	N/A	
3374336005	24-SB5	SW846 8260B	SW846 5035A	
		S2540G-15	N/A	
3374336006	24-SB6	SW846 8260B	SW846 5035A	
		S2540G-15	N/A	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3374336001	24-SB1	SW846 5035A	1280548	08/16/2024 08:50	JTH	SW846 8260B	1280549
		SW846 5035A	1278678	08/16/2024 08:50	TMP	SW846 8260B	1278679
		N/A	N/A	N/A		S2540G-15	1278134
3374336002	24-SB2	SW846 5035A	1280548	08/16/2024 09:20	VLM	SW846 8260B	1280549
		N/A	N/A	N/A		S2540G-15	1278134
3374336003	24-SB3	SW846 5035A	1278678	08/16/2024 09:45	TMP	SW846 8260B	1278679
		N/A	N/A	N/A		S2540G-15	1278134
3374336004	24-SB4	SW846 5035A	1278678	08/16/2024 10:05	TMP	SW846 8260B	1278679
		N/A	N/A	N/A		S2540G-15	1278134
3374336005	24-SB5	SW846 5035A	1278678	08/16/2024 10:40	TMP	SW846 8260B	1278679
		N/A	N/A	N/A		S2540G-15	1278134
3374336006	24-SB6	SW846 5035A	1278678	08/16/2024 11:00	TMP	SW846 8260B	1278679
		N/A	N/A	N/A		S2540G-15	1278134

301 Fulling Mill Road
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT SAMPLER. INSTRUCTIONS ON THE BACK.

3374336
Logged By: SLS
PM: JLS

336

1 of 1

Client Name: Synergy
Address: 155 Railroad Plaza
Contact: Ryan Houde
Phone#:
Project Name/#: Gatz Auto 24-01483
Bill To:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required: Approved?
Email? [✓] -Y rhoude@synergyenviro.com
Fax? [ ] -Y No.:

Container Type / Container Size / Preservative

ANALYSES/METHOD REQUESTED

PAUG

Enter Number of ... low.

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	*G or C	**Matrix	
1	24-SB1	8/16/24	850	G	Soil	K
2	24-SB2		920			K
3	24-SB3		945			K
4	24-SB4		1005			K
5	24-SB5		1040			K
6	24-SB6	"	1100	"	"	K
7						
8						
9						
10						

Temp By: DB | WO Temp (°C): 2 | Therm ID: 571

Receipt Info Completed By: DPB

Cooler Custody Seal Intact	Y N	NA
Sample Custody Seal Intact	Y N	NA
Received on Ice	Y N	NA
Cooler & Samples Intact	Y N	
Correct Containers Provided	Y N	
Sample Label/COC Agree	Y N	
Adequate Sample Volumes	Y N	
CR6 Samples Filtered	Y N	
OP Samples Filtered	Y N	
VOA Trip Blank	Y N	
NIs 4 Days?	Y	
Rad Screen (uCi)		
Courier/Tracking #:		
SDWA Compliance	Y	
PWSID		
WV Containers 0-6°C	Y N	

Lab Information (completed by Receiving Lab)
W.O. Temp: ____ Therm ID: ____
Courier/Tracking #:
Purchase Order #:
Project Comments:

ALS Field Services: □ Pickup □ Labor
□ Composite Sampling □ Rental Equipment
Other:

Sample/COC Comments

1 ~~60~~ G 40mL MEOH
1 G 4oz
each
DB
8/16/24

SAMPLED BY (Please Print): Ryan Houde (RMH)

Sampler Comments:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 ~~RH~~ Synergy	8/16/24	1240	2 Jeff Benner / ALS	8/16/24	16:30
3 Jeff Benner / ALS	8/16/24	19:10	4	8/16/24	1910
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE/DOD [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ] other
Reportable to PADEP? Yes [ ] No [ ] PWSID #
Sample Disposal: Lab [ ] Special [ ]
EDDS: Format Type-

* G=Grab; C=Composite
**Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Middletown, PA 17057

Rev 11/18

APPENDIX D

ALS Laboratory Soil Analytical Data – November 2024

Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 |

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343, NJ PA101

Analytical Results Report For **Synergy Environmental, Inc.**

Project Gatz Auto 24-01483
Workorder 3386158
Report ID 366146 on 11/11/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Nov 05, 2024.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Jessica Smith (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):
Synergy Environmental, Inc. - Synergy Environmental, Inc.
Ben Andes - Synergy Environmental,Inc.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Jessica Smith

Jessica Smith *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3386158001	24-SB-7	Solid	11/05/2024 09:45	11/05/2024 19:30	CBC	Collected By Client
3386158002	24-SB-8	Solid	11/05/2024 08:05	11/05/2024 19:30	CBC	Collected By Client
3386158003	24-SB-9	Solid	11/05/2024 08:35	11/05/2024 19:30	CBC	Collected By Client
3386158004	24-SB-10	Solid	11/05/2024 09:10	11/05/2024 19:30	CBC	Collected By Client
3386158005	24-SB-10D	Solid	11/05/2024 09:15	11/05/2024 19:30	CBC	Collected By Client
3386158006	24-SB-10DD	Solid	11/05/2024 09:20	11/05/2024 19:30	CBC	Collected By Client
3386158007	24-SB-11	Solid	11/05/2024 10:25	11/05/2024 19:30	CBC	Collected By Client
3386158008	24-SB-11D	Solid	11/05/2024 10:30	11/05/2024 19:30	CBC	Collected By Client
3386158009	24-SB-12	Solid	11/05/2024 12:25	11/05/2024 19:30	CBC	Collected By Client
3386158010	24-SB-12D	Solid	11/05/2024 12:30	11/05/2024 19:30	CBC	Collected By Client
3386158011	24-SB-12DD	Solid	11/05/2024 12:35	11/05/2024 19:30	CBC	Collected By Client

Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:
  EPA 300.1 Rev. 1.0-1997
  EPA 300.0 Rev. 2.1-1993
  EPA 353.2 Rev. 2.0-1993
  EPA 410.4 Rev. 1.0-1993
  EPA 420.4 Rev. 1.0-1993
  EPA 365.1 Rev. 2.0-1993
  EPA 200.7 Rev. 4.4-1994
  EPA 200.8 Rev. 5.4-1994
  EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Ethylbenzene. The % Recovery was reported as 137 and the control limits were 76 to 136.
2	The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Isopropylbenzene. The % Recovery was reported as 148 and the control limits were 72 to 137.
3	The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Isopropylbenzene. The % Recovery was reported as 154 and the control limits were 72 to 137.
4	The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as -55.9 and the control limits were 46 to 142.
5	The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Total Xylenes. The % Recovery was reported as 145 and the control limits were 75 to 136.
6	The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,3,5-Trimethylbenzene. The % Recovery was reported as 142 and the control limits were 74 to 137.
7	The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,3,5-Trimethylbenzene. The % Recovery was reported as 169 and the control limits were 74 to 137.

Detected Results Summary

Client Sample ID	24-SB-7	Collected	11/05/2024 09:45
Lab Sample ID	3386158001	Lab Receipt	11/05/2024 19:30

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
Moisture	12.1	%	0.1	S2540G-15	#
Total Solids	87.9	%	0.1	S2540G-15	#

Detected Results Summary

Client Sample ID	24-SB-8	Collected	11/05/2024 08:05
Lab Sample ID	3386158002	Lab Receipt	11/05/2024 19:30

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
Moisture	11.6	%	0.1	S2540G-15	#
Total Solids	88.4	%	0.1	S2540G-15	#

Detected Results Summary

Client Sample ID	24-SB-9	Collected	11/05/2024 08:35
Lab Sample ID	3386158003	Lab Receipt	11/05/2024 19:30

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
Moisture	9.3	%	0.1	S2540G-15	#
Total Solids	90.7	%	0.1	S2540G-15	#

Detected Results Summary

Client Sample ID	24-SB-10	Collected	11/05/2024 09:10
Lab Sample ID	3386158004	Lab Receipt	11/05/2024 19:30

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
Moisture	6.8	%	0.1	S2540G-15	#
Total Solids	93.2	%	0.1	S2540G-15	#

Detected Results Summary

Client Sample ID	24-SB-10D	Collected	11/05/2024 09:15
Lab Sample ID	3386158005	Lab Receipt	11/05/2024 19:30

Compound	Result	Units	RDL	Method	Flag
VOLATILE ORGANICS					
1,2,4-Trimethylbenzene	24100	ug/kg	269	SW846 8260B	#
1,3,5-Trimethylbenzene	6790	ug/kg	53.9	SW846 8260B	#
Ethylbenzene	903	ug/kg	53.9	SW846 8260B	#
Isopropylbenzene	353	ug/kg	53.9	SW846 8260B	#
Naphthalene	9240	ug/kg	108	SW846 8260B	#
Toluene	59.9	ug/kg	53.9	SW846 8260B	#
Total Xylenes	6560	ug/kg	162	SW846 8260B	#
WET CHEMISTRY					
Moisture	9.0	%	0.1	S2540G-15	#
Total Solids	91.0	%	0.1	S2540G-15	#

Detected Results Summary

Client Sample ID	24-SB-10DD	Collected	11/05/2024 09:20
Lab Sample ID	3386158006	Lab Receipt	11/05/2024 19:30

Compound	Result	Units	RDL	Method	Flag
VOLATILE ORGANICS					
1,2,4-Trimethylbenzene	152000	ug/kg	1170	SW846 8260B	#
1,3,5-Trimethylbenzene	46500	ug/kg	1170	SW846 8260B	#
Benzene	80.8	ug/kg	58.4	SW846 8260B	#
Ethylbenzene	16700	ug/kg	1170	SW846 8260B	#
Isopropylbenzene	4240	ug/kg	58.4	SW846 8260B	#
Naphthalene	21400	ug/kg	2340	SW846 8260B	#
Toluene	5840	ug/kg	58.4	SW846 8260B	#
Total Xylenes	111000	ug/kg	3510	SW846 8260B	#
WET CHEMISTRY					
Moisture	12.3	%	0.1	S2540G-15	#
Total Solids	87.7	%	0.1	S2540G-15	#

Detected Results Summary

Client Sample ID	24-SB-11	Collected	11/05/2024 10:25
Lab Sample ID	3386158007	Lab Receipt	11/05/2024 19:30

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
Moisture	16.5	%	0.1	S2540G-15	#
Total Solids	83.5	%	0.1	S2540G-15	#

Detected Results Summary

Client Sample ID	24-SB-11D	Collected	11/05/2024 10:30
Lab Sample ID	3386158008	Lab Receipt	11/05/2024 19:30

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
Moisture	22.0	%	0.1	S2540G-15	#
Total Solids	78.0	%	0.1	S2540G-15	#

Detected Results Summary

Client Sample ID	24-SB-12	Collected	11/05/2024 12:25
Lab Sample ID	3386158009	Lab Receipt	11/05/2024 19:30

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
Moisture	22.4	%	0.1	S2540G-15	#
Total Solids	77.6	%	0.1	S2540G-15	#

Detected Results Summary

Client Sample ID	24-SB-12D	Collected	11/05/2024 12:30
Lab Sample ID	3386158010	Lab Receipt	11/05/2024 19:30

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
Moisture	24.5	%	0.1	S2540G-15	#
Total Solids	75.5	%	0.1	S2540G-15	#

Detected Results Summary

Client Sample ID	24-SB-12DD	Collected	11/05/2024 12:35
Lab Sample ID	3386158011	Lab Receipt	11/05/2024 19:30

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
Moisture	20.2	%	0.1	S2540G-15	#
Total Solids	79.8	%	0.1	S2540G-15	#

Results

Client Sample ID	24-SB-7	Collected	11/05/2024 09:45
Lab Sample ID	3386158001	Lab Receipt	11/05/2024 19:30

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/kg	62.8	SW846 8260B	50	11/07/2024 16:39	JTH	A
1,3,5-Trimethylbenzene	ND	ND	ug/kg	62.8	SW846 8260B	50	11/07/2024 16:39	JTH	A
Benzene	ND	ND	ug/kg	62.8	SW846 8260B	50	11/07/2024 16:39	JTH	A
Ethylbenzene	ND	ND	ug/kg	62.8	SW846 8260B	50	11/07/2024 16:39	JTH	A
Isopropylbenzene	ND	ND	ug/kg	62.8	SW846 8260B	50	11/07/2024 16:39	JTH	A
Methyl t-Butyl Ether	ND	ND	ug/kg	62.8	SW846 8260B	50	11/07/2024 16:39	JTH	A
Naphthalene	ND	ND	ug/kg	126	SW846 8260B	50	11/07/2024 16:39	JTH	A
Toluene	ND	ND	ug/kg	62.8	SW846 8260B	50	11/07/2024 16:39	JTH	A
Total Xylenes	ND	ND	ug/kg	188	SW846 8260B	50	11/07/2024 16:39	JTH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.5%	71 – 146	11/07/2024 16:39	
4-Bromofluorobenzene	460-00-4	100%	46 – 138	11/07/2024 16:39	
Dibromofluoromethane	1868-53-7	83.1%	42 – 143	11/07/2024 16:39	
Toluene-d8	2037-26-5	99.6%	54 – 141	11/07/2024 16:39	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	12.1		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B
Total Solids	87.9		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B

Results

Client Sample ID	24-SB-8	Collected	11/05/2024 08:05
Lab Sample ID	3386158002	Lab Receipt	11/05/2024 19:30

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/kg	60.7	SW846 8260B	50	11/07/2024 16:59	JTH	A
1,3,5-Trimethylbenzene	ND	ND	ug/kg	60.7	SW846 8260B	50	11/07/2024 16:59	JTH	A
Benzene	ND	ND	ug/kg	60.7	SW846 8260B	50	11/07/2024 16:59	JTH	A
Ethylbenzene	ND	ND	ug/kg	60.7	SW846 8260B	50	11/07/2024 16:59	JTH	A
Isopropylbenzene	ND	ND	ug/kg	60.7	SW846 8260B	50	11/07/2024 16:59	JTH	A
Methyl t-Butyl Ether	ND	ND	ug/kg	60.7	SW846 8260B	50	11/07/2024 16:59	JTH	A
Naphthalene	ND	ND	ug/kg	121	SW846 8260B	50	11/07/2024 16:59	JTH	A
Toluene	ND	ND	ug/kg	60.7	SW846 8260B	50	11/07/2024 16:59	JTH	A
Total Xylenes	ND	ND	ug/kg	182	SW846 8260B	50	11/07/2024 16:59	JTH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	88.2%	71 – 146	11/07/2024 16:59	
4-Bromofluorobenzene	460-00-4	89%	46 – 138	11/07/2024 16:59	
Dibromofluoromethane	1868-53-7	79.6%	42 – 143	11/07/2024 16:59	
Toluene-d8	2037-26-5	91.4%	54 – 141	11/07/2024 16:59	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	11.6		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B
Total Solids	88.4		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B

Results

Client Sample ID	24-SB-9	Collected	11/05/2024 08:35
Lab Sample ID	3386158003	Lab Receipt	11/05/2024 19:30

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/kg	73.9	SW846 8260B	50	11/07/2024 17:20	JTH	A
1,3,5-Trimethylbenzene	ND	ND	ug/kg	73.9	SW846 8260B	50	11/07/2024 17:20	JTH	A
Benzene	ND	ND	ug/kg	73.9	SW846 8260B	50	11/07/2024 17:20	JTH	A
Ethylbenzene	ND	ND	ug/kg	73.9	SW846 8260B	50	11/07/2024 17:20	JTH	A
Isopropylbenzene	ND	ND	ug/kg	73.9	SW846 8260B	50	11/07/2024 17:20	JTH	A
Methyl t-Butyl Ether	ND	ND	ug/kg	73.9	SW846 8260B	50	11/07/2024 17:20	JTH	A
Naphthalene	ND	ND	ug/kg	148	SW846 8260B	50	11/07/2024 17:20	JTH	A
Toluene	ND	ND	ug/kg	73.9	SW846 8260B	50	11/07/2024 17:20	JTH	A
Total Xylenes	ND	ND	ug/kg	222	SW846 8260B	50	11/07/2024 17:20	JTH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96%	71 – 146	11/07/2024 17:20	
4-Bromofluorobenzene	460-00-4	99.1%	46 – 138	11/07/2024 17:20	
Dibromofluoromethane	1868-53-7	82.3%	42 – 143	11/07/2024 17:20	
Toluene-d8	2037-26-5	101%	54 – 141	11/07/2024 17:20	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	9.3		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B
Total Solids	90.7		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B

Results

Client Sample ID	24-SB-10	Collected	11/05/2024 09:10
Lab Sample ID	3386158004	Lab Receipt	11/05/2024 19:30

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/kg	68.1	SW846 8260B	50	11/07/2024 17:40	JTH	A
1,3,5-Trimethylbenzene	ND	ND	ug/kg	68.1	SW846 8260B	50	11/07/2024 17:40	JTH	A
Benzene	ND	ND	ug/kg	68.1	SW846 8260B	50	11/07/2024 17:40	JTH	A
Ethylbenzene	ND	ND	ug/kg	68.1	SW846 8260B	50	11/07/2024 17:40	JTH	A
Isopropylbenzene	ND	ND	ug/kg	68.1	SW846 8260B	50	11/07/2024 17:40	JTH	A
Methyl t-Butyl Ether	ND	ND	ug/kg	68.1	SW846 8260B	50	11/07/2024 17:40	JTH	A
Naphthalene	ND	ND	ug/kg	136	SW846 8260B	50	11/07/2024 17:40	JTH	A
Toluene	ND	ND	ug/kg	68.1	SW846 8260B	50	11/07/2024 17:40	JTH	A
Total Xylenes	ND	ND	ug/kg	204	SW846 8260B	50	11/07/2024 17:40	JTH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	90.2%	71 – 146	11/07/2024 17:40	
4-Bromofluorobenzene	460-00-4	94.8%	46 – 138	11/07/2024 17:40	
Dibromofluoromethane	1868-53-7	80.1%	42 – 143	11/07/2024 17:40	
Toluene-d8	2037-26-5	94.7%	54 – 141	11/07/2024 17:40	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	6.8		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B
Total Solids	93.2		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B

Results

Client Sample ID	24-SB-10D	Collected	11/05/2024 09:15
Lab Sample ID	3386158005	Lab Receipt	11/05/2024 19:30

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	24100		ug/kg	269	SW846 8260B	250	11/08/2024 17:49	BST	A
1,3,5-Trimethylbenzene	6790	6,7	ug/kg	53.9	SW846 8260B	50	11/07/2024 18:01	JTH	A
Benzene	ND	ND	ug/kg	53.9	SW846 8260B	50	11/07/2024 18:01	JTH	A
Ethylbenzene	903	1	ug/kg	53.9	SW846 8260B	50	11/07/2024 18:01	JTH	A
Isopropylbenzene	353	2,3	ug/kg	53.9	SW846 8260B	50	11/07/2024 18:01	JTH	A
Methyl t-Butyl Ether	ND	ND	ug/kg	53.9	SW846 8260B	50	11/07/2024 18:01	JTH	A
Naphthalene	9240	4	ug/kg	108	SW846 8260B	50	11/07/2024 18:01	JTH	A
Toluene	59.9		ug/kg	53.9	SW846 8260B	50	11/07/2024 18:01	JTH	A
Total Xylenes	6560	5	ug/kg	162	SW846 8260B	50	11/07/2024 18:01	JTH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	91.4%	71 – 146	11/08/2024 17:49	
1,2-Dichloroethane-d4	17060-07-0	90.5%	71 – 146	11/07/2024 18:01	
4-Bromofluorobenzene	460-00-4	100%	46 – 138	11/08/2024 17:49	
4-Bromofluorobenzene	460-00-4	103%	46 – 138	11/07/2024 18:01	
Dibromofluoromethane	1868-53-7	90.1%	42 – 143	11/08/2024 17:49	
Dibromofluoromethane	1868-53-7	80.1%	42 – 143	11/07/2024 18:01	
Toluene-d8	2037-26-5	96.1%	54 – 141	11/08/2024 17:49	
Toluene-d8	2037-26-5	92.6%	54 – 141	11/07/2024 18:01	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	9.0		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B
Total Solids	91.0		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B

Results

Client Sample ID	24-SB-10DD	Collected	11/05/2024 09:20
Lab Sample ID	3386158006	Lab Receipt	11/05/2024 19:30

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	152000		ug/kg	1170	SW846 8260B	1000	11/08/2024 18:09	BST	A
1,3,5-Trimethylbenzene	46500		ug/kg	1170	SW846 8260B	1000	11/08/2024 18:09	BST	A
Benzene	80.8		ug/kg	58.4	SW846 8260B	50	11/07/2024 18:21	JTH	A
Ethylbenzene	16700		ug/kg	1170	SW846 8260B	1000	11/08/2024 18:09	BST	A
Isopropylbenzene	4240		ug/kg	58.4	SW846 8260B	50	11/07/2024 18:21	JTH	A
Methyl t-Butyl Ether	ND	ND	ug/kg	58.4	SW846 8260B	50	11/07/2024 18:21	JTH	A
Naphthalene	21400		ug/kg	2340	SW846 8260B	1000	11/08/2024 18:09	BST	A
Toluene	5840		ug/kg	58.4	SW846 8260B	50	11/07/2024 18:21	JTH	A
Total Xylenes	111000		ug/kg	3510	SW846 8260B	1000	11/08/2024 18:09	BST	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.8%	71 – 146	11/08/2024 18:09	
1,2-Dichloroethane-d4	17060-07-0	92.6%	71 – 146	11/07/2024 18:21	
4-Bromofluorobenzene	460-00-4	99.5%	46 – 138	11/08/2024 18:09	
4-Bromofluorobenzene	460-00-4	100%	46 – 138	11/07/2024 18:21	
Dibromofluoromethane	1868-53-7	92.2%	42 – 143	11/08/2024 18:09	
Dibromofluoromethane	1868-53-7	81.2%	42 – 143	11/07/2024 18:21	
Toluene-d8	2037-26-5	97.5%	54 – 141	11/08/2024 18:09	
Toluene-d8	2037-26-5	87.4%	54 – 141	11/07/2024 18:21	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	12.3		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B
Total Solids	87.7		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B

Results

Client Sample ID	24-SB-11	Collected	11/05/2024 10:25
Lab Sample ID	3386158007	Lab Receipt	11/05/2024 19:30

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/kg	62.1	SW846 8260B	50	11/08/2024 21:13	BST	A
1,3,5-Trimethylbenzene	ND	ND	ug/kg	62.1	SW846 8260B	50	11/08/2024 21:13	BST	A
Benzene	ND	ND	ug/kg	62.1	SW846 8260B	50	11/08/2024 21:13	BST	A
Ethylbenzene	ND	ND	ug/kg	62.1	SW846 8260B	50	11/08/2024 21:13	BST	A
Isopropylbenzene	ND	ND	ug/kg	62.1	SW846 8260B	50	11/08/2024 21:13	BST	A
Methyl t-Butyl Ether	ND	ND	ug/kg	62.1	SW846 8260B	50	11/08/2024 21:13	BST	A
Naphthalene	ND	ND	ug/kg	124	SW846 8260B	50	11/08/2024 21:13	BST	A
Toluene	ND	ND	ug/kg	62.1	SW846 8260B	50	11/08/2024 21:13	BST	A
Total Xylenes	ND	ND	ug/kg	186	SW846 8260B	50	11/08/2024 21:13	BST	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	90.5%	71 – 146	11/08/2024 21:13	
4-Bromofluorobenzene	460-00-4	95.1%	46 – 138	11/08/2024 21:13	
Dibromofluoromethane	1868-53-7	79.9%	42 – 143	11/08/2024 21:13	
Toluene-d8	2037-26-5	96.7%	54 – 141	11/08/2024 21:13	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	16.5		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B
Total Solids	83.5		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B

Results

Client Sample ID	24-SB-11D	Collected	11/05/2024 10:30
Lab Sample ID	3386158008	Lab Receipt	11/05/2024 19:30

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/kg	62.4	SW846 8260B	50	11/08/2024 21:34	BST	A
1,3,5-Trimethylbenzene	ND	ND	ug/kg	62.4	SW846 8260B	50	11/08/2024 21:34	BST	A
Benzene	ND	ND	ug/kg	62.4	SW846 8260B	50	11/08/2024 21:34	BST	A
Ethylbenzene	ND	ND	ug/kg	62.4	SW846 8260B	50	11/08/2024 21:34	BST	A
Isopropylbenzene	ND	ND	ug/kg	62.4	SW846 8260B	50	11/08/2024 21:34	BST	A
Methyl t-Butyl Ether	ND	ND	ug/kg	62.4	SW846 8260B	50	11/08/2024 21:34	BST	A
Naphthalene	ND	ND	ug/kg	125	SW846 8260B	50	11/08/2024 21:34	BST	A
Toluene	ND	ND	ug/kg	62.4	SW846 8260B	50	11/08/2024 21:34	BST	A
Total Xylenes	ND	ND	ug/kg	187	SW846 8260B	50	11/08/2024 21:34	BST	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	90.1%	71 – 146	11/08/2024 21:34	
4-Bromofluorobenzene	460-00-4	93.7%	46 – 138	11/08/2024 21:34	
Dibromofluoromethane	1868-53-7	80.8%	42 – 143	11/08/2024 21:34	
Toluene-d8	2037-26-5	95.1%	54 – 141	11/08/2024 21:34	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	22.0		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B
Total Solids	78.0		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B

Results

Client Sample ID	24-SB-12	Collected	11/05/2024 12:25
Lab Sample ID	3386158009	Lab Receipt	11/05/2024 19:30

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/kg	63.6	SW846 8260B	50	11/08/2024 21:54	BST	A
1,3,5-Trimethylbenzene	ND	ND	ug/kg	63.6	SW846 8260B	50	11/08/2024 21:54	BST	A
Benzene	ND	ND	ug/kg	63.6	SW846 8260B	50	11/08/2024 21:54	BST	A
Ethylbenzene	ND	ND	ug/kg	63.6	SW846 8260B	50	11/08/2024 21:54	BST	A
Isopropylbenzene	ND	ND	ug/kg	63.6	SW846 8260B	50	11/08/2024 21:54	BST	A
Methyl t-Butyl Ether	ND	ND	ug/kg	63.6	SW846 8260B	50	11/08/2024 21:54	BST	A
Naphthalene	ND	ND	ug/kg	127	SW846 8260B	50	11/08/2024 21:54	BST	A
Toluene	ND	ND	ug/kg	63.6	SW846 8260B	50	11/08/2024 21:54	BST	A
Total Xylenes	ND	ND	ug/kg	191	SW846 8260B	50	11/08/2024 21:54	BST	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93%	71 – 146	11/08/2024 21:54	
4-Bromofluorobenzene	460-00-4	97.1%	46 – 138	11/08/2024 21:54	
Dibromofluoromethane	1868-53-7	84.5%	42 – 143	11/08/2024 21:54	
Toluene-d8	2037-26-5	94.4%	54 – 141	11/08/2024 21:54	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	22.4		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B
Total Solids	77.6		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B

Results

Client Sample ID	24-SB-12D	Collected	11/05/2024 12:30
Lab Sample ID	3386158010	Lab Receipt	11/05/2024 19:30

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/kg	60.8	SW846 8260B	50	11/08/2024 22:15	BST	A
1,3,5-Trimethylbenzene	ND	ND	ug/kg	60.8	SW846 8260B	50	11/08/2024 22:15	BST	A
Benzene	ND	ND	ug/kg	60.8	SW846 8260B	50	11/08/2024 22:15	BST	A
Ethylbenzene	ND	ND	ug/kg	60.8	SW846 8260B	50	11/08/2024 22:15	BST	A
Isopropylbenzene	ND	ND	ug/kg	60.8	SW846 8260B	50	11/08/2024 22:15	BST	A
Methyl t-Butyl Ether	ND	ND	ug/kg	60.8	SW846 8260B	50	11/08/2024 22:15	BST	A
Naphthalene	ND	ND	ug/kg	122	SW846 8260B	50	11/08/2024 22:15	BST	A
Toluene	ND	ND	ug/kg	60.8	SW846 8260B	50	11/08/2024 22:15	BST	A
Total Xylenes	ND	ND	ug/kg	182	SW846 8260B	50	11/08/2024 22:15	BST	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	90.3%	71 – 146	11/08/2024 22:15	
4-Bromofluorobenzene	460-00-4	95.2%	46 – 138	11/08/2024 22:15	
Dibromofluoromethane	1868-53-7	79.1%	42 – 143	11/08/2024 22:15	
Toluene-d8	2037-26-5	99.2%	54 – 141	11/08/2024 22:15	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	24.5		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B
Total Solids	75.5		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B

Results

Client Sample ID	24-SB-12DD	Collected	11/05/2024 12:35
Lab Sample ID	3386158011	Lab Receipt	11/05/2024 19:30

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/kg	63.3	SW846 8260B	50	11/08/2024 22:35	BST	A
1,3,5-Trimethylbenzene	ND	ND	ug/kg	63.3	SW846 8260B	50	11/08/2024 22:35	BST	A
Benzene	ND	ND	ug/kg	63.3	SW846 8260B	50	11/08/2024 22:35	BST	A
Ethylbenzene	ND	ND	ug/kg	63.3	SW846 8260B	50	11/08/2024 22:35	BST	A
Isopropylbenzene	ND	ND	ug/kg	63.3	SW846 8260B	50	11/08/2024 22:35	BST	A
Methyl t-Butyl Ether	ND	ND	ug/kg	63.3	SW846 8260B	50	11/08/2024 22:35	BST	A
Naphthalene	ND	ND	ug/kg	127	SW846 8260B	50	11/08/2024 22:35	BST	A
Toluene	ND	ND	ug/kg	63.3	SW846 8260B	50	11/08/2024 22:35	BST	A
Total Xylenes	ND	ND	ug/kg	190	SW846 8260B	50	11/08/2024 22:35	BST	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92.7%	71 – 146	11/08/2024 22:35	
4-Bromofluorobenzene	460-00-4	97%	46 – 138	11/08/2024 22:35	
Dibromofluoromethane	1868-53-7	79.6%	42 – 143	11/08/2024 22:35	
Toluene-d8	2037-26-5	98.5%	54 – 141	11/08/2024 22:35	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Moisture	20.2		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B
Total Solids	79.8		%	0.1	S2540G-15	1	11/06/2024 16:25	E1R	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3386158001	24-SB-7	SW846 8260B	SW846 5035A	
		S2540G-15	N/A	
3386158002	24-SB-8	SW846 8260B	SW846 5035A	
		S2540G-15	N/A	
3386158003	24-SB-9	SW846 8260B	SW846 5035A	
		S2540G-15	N/A	
3386158004	24-SB-10	SW846 8260B	SW846 5035A	
		S2540G-15	N/A	
3386158005	24-SB-10D	SW846 8260B	SW846 5035A	
		SW846 8260B	SW846 5035A	
		S2540G-15	N/A	
3386158006	24-SB-10DD	SW846 8260B	SW846 5035A	
		SW846 8260B	SW846 5035A	
		S2540G-15	N/A	
3386158007	24-SB-11	SW846 8260B	SW846 5035A	
		S2540G-15	N/A	
3386158008	24-SB-11D	SW846 8260B	SW846 5035A	
		S2540G-15	N/A	
3386158009	24-SB-12	SW846 8260B	SW846 5035A	
		S2540G-15	N/A	
3386158010	24-SB-12D	SW846 8260B	SW846 5035A	
		S2540G-15	N/A	
3386158011	24-SB-12DD	SW846 8260B	SW846 5035A	
		S2540G-15	N/A	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3386158001	24-SB-7	SW846 5035A	1329232	11/05/2024 09:45	JTH	SW846 8260B	1329234
		N/A	N/A	N/A		S2540G-15	1327765
3386158002	24-SB-8	SW846 5035A	1329232	11/05/2024 08:05	JTH	SW846 8260B	1329234
		N/A	N/A	N/A		S2540G-15	1327765
3386158003	24-SB-9	SW846 5035A	1329232	11/05/2024 08:35	JTH	SW846 8260B	1329234
		N/A	N/A	N/A		S2540G-15	1327765
3386158004	24-SB-10	SW846 5035A	1329232	11/05/2024 09:10	JTH	SW846 8260B	1329234
		N/A	N/A	N/A		S2540G-15	1327765
3386158005	24-SB-10D	SW846 5035A	1330319	11/05/2024 09:15	BST	SW846 8260B	1330324
		SW846 5035A	1329232	11/05/2024 09:15	JTH	SW846 8260B	1329234
		N/A	N/A	N/A		S2540G-15	1327765
3386158006	24-SB-10DD	SW846 5035A	1330319	11/05/2024 09:20	BST	SW846 8260B	1330324
		SW846 5035A	1329232	11/05/2024 09:20	JTH	SW846 8260B	1329234
		N/A	N/A	N/A		S2540G-15	1327765
3386158007	24-SB-11	SW846 5035A	1330319	11/05/2024 10:25	BST	SW846 8260B	1330324
		N/A	N/A	N/A		S2540G-15	1327765
3386158008	24-SB-11D	SW846 5035A	1330319	11/05/2024 10:30	BST	SW846 8260B	1330324
		N/A	N/A	N/A		S2540G-15	1327765
3386158009	24-SB-12	SW846 5035A	1330319	11/05/2024 12:25	BST	SW846 8260B	1330324
		N/A	N/A	N/A		S2540G-15	1327765
3386158010	24-SB-12D	SW846 5035A	1330319	11/05/2024 12:30	BST	SW846 8260B	1330324
		N/A	N/A	N/A		S2540G-15	1327765
3386158011	24-SB-12DD	SW846 5035A	1330319	11/05/2024 12:35	BST	SW846 8260B	1330324
		N/A	N/A	N/A		S2540G-15	1327765

ALS

301 Fulling Mill Rd, Suite A
Middletown, PA 17057
P. 717-944-5541

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 3386158
Logged By: DIG
PM: JLS
1 of 2

ALS Quote

Client Name: Synergy
Address: 155 Railroad Plaza
Contact: Ryan Houck
Phone#:
Project Name/#: Gatz Auto 24-01483
Bill To:
Purchase Order #:
TAT [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required: Approved?
Email? [X] rhouck@synergyenvinc.com

	Container Type	Container Size	Preservative
	G	40 mL	MeOH

MP 11/5/24

Orthophosphate Filtered? Y N NA Hexavalent Chromium Filtered? Y N NA

ANALYSIS / METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	*G or C	**Matrix (See bottom of COC)	PAUG	Enter Number of Containers
1	24-SB-7	11/5/24	945		G	Soil	X	
2	24-SB-8		805				X	
3	24-SB-9		835				X	MP 11/5/24
4	24-SB-10		910				X	
5	24-SB-10D		915				X	
6	24-SB-10DD		920				X	
7	24-SB-11		1025				X	
8	24-SB-11D		1030				X	
9	24-SB-12		1225				X	
10	24-SB-12D		1230				X	

Circle Sample Collector: ALS Tech / Client
Name: RMH ID:

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
11/5/24	1455	1	Synergy	2	ALS
11-5-24	1500	3	ALS	4	ALS
11/5/24	1930	5		6	ALS
		7		8	
		9		10	

* G=Grab; C=Composite **Matrix - A=Air; D=Drinking Water; GW=Groundwater; O=Oil; LW=Liquid Waste; S=Solid/Soil/Sludge; SW=Surface Water; WP=Wipe; WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Suite A, Middletown, PA 17057

Temp Taken By: Therm ID: WO Temp (°C)

Receipt Info completed by: WV Containers 0-6°C Y N NA

Cooler Custody Seals Intact	Y	N	NA
Sample Custody Seal Intact	Y	N	NA
Received on Ice	Y	N	NA
Coolers & Samples Intact	Y	N	
Correct Containers Provided	Y	N	
Sample Label/COC Agree	Y	N	
Adequate Sample Volumes	Y	N	
VOA only: Headspace Present	Y	N	NA
VOA only: Trip Blank	Y	N	NA

NJ ≤ 4 days? Y N

Deviations? NO YES
If YES, list below

Client contact:
Date/Tech:

Courier/Tracking #:

Sample(s) for Radiation testing? Y N Rad Screen (uCi)
Reportable SDWA Sample(s)? Y N New Source? Y N
SDWA State of Origin? New Source Contact:
PWSID #
PWS Contact: PWS Phone #:

SDWA Sample Type Key: D=Distribution E=Entry Point R=Raw P=Plant C=Check S=Special A=Annual Startup

Temp By: DB | WO Temp (°C): 3 | Therm ID: S69

Receipt Info Completed By:	DPB
Cooler Custody Seal Intact	N NA
Sample Custody Seal Intact	Y N NA
Received on Ice	Y N
Cooler & Samples Intact	Y N
Correct Containers Provided	Y N
Sample Label/COC Agree	Y N
Adequate Sample Volumes	Y N
CR6 Samples Filtered	Y N NA
OP Samples Filtered	Y N NA
VOA Trip Blank	Y N NA
NJ≤ 4 Days?	Y
Rad Screen (uCi)	
Courier/Tracking #:	
SDWA Compliance	Y N
PWSID	
WV Containers 0-6°C	Y N NA

1x G/MECH
1x G/UNP EA.
DB 11/5/24

Contains Short Hold Testing YES NO

Internal Use: If less than 48 hours - notify lab upon receipt

Data Deliverables: [ ] Standard Lvl 1 [ ] Standard Lvl 2 [ ] Standard Lvl 3 [ ] Standard Lvl 4 [ ] CLP-like [ ] DOD [ ] NJ RED [ ] NJ Full [ ] HSCA [ ] Landfill [ ] NJ GW

EDDs: [ ] Excel Summary [ ] Equis [ ] Custom

Sample Disposal: [ ] Lab [ ] Special

EDDS: Format Type

State Samples Collected In: [ ] NY [ ] NJ [x] PA [ ] WV [ ] FL [ ] other

Rev 11.14.22

301 Fulling Mill Rd, Suite A
Middletown, PA 17057
P. 717-944-5541

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 3386158 — 2 of 2
ALS Quote #:

Client Name: Synergy
Address: 155 Railroad Plaza
Contact: Ryan Houck
Phone#:
Project Name/#: Gatz Auto 24-01483
Bill To:
Purchase Order #:
TAT [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required: Approved?
Email? [X] choude@synergyenviro.com

Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	*G or C	**Matrix (See bottom of COC)	Container Type	Container Size	Preservative	Orthophosphate Filtered?	Hexavalent Chromium Filtered?	Enter Number of Containers Per Sample or Field Results Below.
1 24-SB-12DD	11/5/24	1235		G	SO	G	40 mL	MeOH	Y N NA	Y N NA	PAH 1 MP 11/5/24
2											
3											
4											
5											
6											
7											
8											
9											
10											

ANALYSIS / METHOD REQUESTED

Circle Sample Collector: ALS Tech / Client
Name: RMH ID:

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
11/5/24	1455	1	Synergy	2	ALS
11/5/24	1500	3	ALS	4	ALS
11/5/24	1930	5		6	ALS
		7		8	
		9		10	

Receipt Information (completed by Receiving Lab)
Temp Taken By: Therm ID: WO Temp (°C)
Receipt Info completed by: WV Containers 0-6°C Y N NA

Cooler Custody Seals Intact	Y	N	NA	Deviations? NO YES
Sample Custody Seal Intact	Y	N	NA	If YES, list below:
Received on Ice	Y	N	NA	
Coolers & Samples Intact	Y	N		
Correct Containers Provided	Y	N		
Sample Label/COC Agree	Y	N		
Adequate Sample Volumes	Y	N		
VOA only: Headspace Present	Y	N	NA	
VOA only: Trip Blank	Y	N	NA	Client contact:

NJ ≤ 4 days? Y N
Courier/Tracking #:
Data/Tech

Sample(s) for Radiation testing? Y N — Rad Screen (uCi)
Reportable SDWA Sample(s)? Y N — New Source? Y N
SDWA State of Origin? — New Source Contact:
PWSID #
PWS Contact: PWS Phone #:

SDWA Sample Type Key: D=Distribution E=Entry Point R=Raw P=Plant C=Check S=Special A=Annual Startup

Contains Short Hold Testing YES NO
Internal Use: If less than 48 hours - notify lab upon receipt

Data Deliverables: [ ] Standard Lvl 1 [ ] Standard Lvl 2 [ ] Standard Lvl 3 [ ] Standard Lvl 4 [ ] CLP-like [ ] DOD [ ] NJ RED [ ] NJ Full [ ] HSCA [ ] Landfill [ ] NJ GW [ ] _____

EDDs: [ ] Excel Summary [ ] Equis [ ] Custom

Sample Disposal: [ ] Lab [ ] Special

EDDS: Format Type

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] WV [ ] FL [ ] other

* G=Grab; C=Composite **Matrix - A=Air; D=Drinking Water; GW=Groundwater; O=Oil; LW=Liquid Waste; S=Solid/Soil/Sludge; SW=Surface Water; WP=Wipe; WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Suite A, Middletown, PA 17057

Rev 11.14.22

APPENDIX E

Monitoring Well Logs

Synergy Environmental Inc.
Environmental Consultants
155 Railroad Plaza, 1st Floor
Royersford, PA 19468

Gatz Auto
2899 Holme Avenue
Philadelphia, Philadelphia County, Pennsylvania

Well Id.: **MW-1**
Page No.:
Project No.: 24-01483
Field Date: 11/6/2024

Subcontractor:	C.S. Garber	Objective:	Monitor Well Installations
Consultant:	RMH	Equipment:	Reich Air Rotary Rig, Air Rotary
Sampler:	N/A	Site elevation:	
Oversight:	RMH	Boring Location:	North of tank field, source area
Log Prepared by:	RMH	TOC Elevation:	

Groundwater Readings: (in feet, from TOC)

Date	Time	Depth
11/7/2024	8:00	36.21

Depth	Comments	Lithologic Description	Stratigraphic Column	Well Diagram	Construction Details
5		0-5' Softdig			
10		5-22' : Brown Silty clay			Solid 2" PVC Riser 0'-20'
15					Bentonite fill chips 1'-18'
20					
25					
30					
35	Moisture in cuttings @ 36'	22'-49' : Brown fine sand with saprolite			
40					Sand 18'-50'
45					Slotted 2" PVC Screen 20'-50'
50		49-50': Gray schist rock			
	feet below ground surface	End of Borehole: 50'			

Remarks:

Synergy Environmental Inc.
Environmental Consultants
155 Railroad Plaza, 1st Floor
Royersford, PA 19468

Gatz Auto
2899 Holme Avenue
Philadelphia, Philadelphia County, Pennsylvania

Well Id.: **MW-2**
Page No.:
Project No.: 24-01483
Field Date: 11/6/2024

Subcontractor:	C.S. Garber	Objective:	Monitor Well Installations
Consultant:	RMH	Equipment:	Reich Air Rotary Rig, Air Rotary
Sampler:	N/A	Site elevation:	
Oversight:	RMH	Boring Location:	West of canopy
Log Prepared by:	RMH	TOC Elevation:	

Groundwater Readings: (in feet, from TOC)

Date	Time	Depth
11/7/2024	8:00	36.11

Depth	Comments	Lithologic Description	Stratigraphic Column	Well Diagram	Construction Details
5		0-5' Softdig			
10		5-15' : Brown Silty clay			Solid 2" PVC Riser 0'-20'
15		15-17': Light brown fine sandy silt			Bentonite fill chips 1'-18'
20		17-28': Light brown sand with weathered saprolite			
25					
30	Soft area between 26-28'				
35		28-42': Brown sand with weathered saprolite			
40					Sand 18'-50'
45					Slotted 2" PVC Screen 20'-50'
50	Fracture 48-50'	42-50': Gray schist rock			
	feet below ground surface	End of Borehole: 50'			

Remarks: First well drilled, did not see water initially. Observed fracture at 48-50', waited for ~10 minutes and significant water entered borehole.

Synergy Environmental Inc.
Environmental Consultants
155 Railroad Plaza, 1st Floor
Royersford, PA 19468

Gatz Auto
2899 Holme Avenue
Philadelphia, Philadelphia County, Pennsylvania

Well Id.: **MW-3**
Page No.:
Project No.: 24-01483
Field Date: 11/6/2024

Subcontractor:	C.S. Garber	Objective:	Monitor Well Installations
Consultant:	RMH	Equipment:	Reich Air Rotary Rig, Air Rotary
Sampler:	N/A	Site elevation:	
Oversight:	RMH	Boring Location:	East of canopy
Log Prepared by:	RMH	TOC Elevation:	

Groundwater Readings: (in feet, from TOC)

Date	Time	Depth
11/7/2024	8:00	34.72

Depth	Comments	Lithologic Description	Stratigraphic Column	Well Diagram	Construction Details
5		0-5' Softdig			Solid 2" PVC Riser 0'-20'
10		5-16' : Brown Silty clay			Bentonite fill chips 1'-18'
15					
20					
25		16-35': Brown fine sane with weathered saprolite			
30					
35	Moisture in cuttings @ 36'				Sand 18'-50'
40					
45		35-50': Dark brown fine sand			Slotted 2" PVC Screen 20'-50'
50					
	feet below ground surface	End of Borehole: 50'			

Remarks:

Synergy Environmental Inc. Environmental Consultants 155 Railroad Plaza, 1st Floor Royersford, PA 19468	**Gatz Auto** 2899 Holme Avenue Philadelphia, Philadelphia County, Pennsylvania	Well Id.: **MW-4** Page No.: Project No.: 24-01483 Field Date: 11/6/2024

				Groundwater Readings: (in feet, from TOC)		
Subcontractor:	C.S. Garber	Objective:	Monitor Well Installations	Date	Time	Depth
Consultant:	RMH	Equipment:	Reich Air Rotary Rig, Air Rotary	11/7/2024	8:00	35.81
Sampler:	N/A	Site elevation:				
Oversight:	RMH	Boring Location:	South end of tank field			
Log Prepared by:	RMH	TOC Elevation:				

Depth	Comments	Lithologic Description	Stratigraphic Column	Well Diagram	Construction Details
5		0-5' Softdig			
10		5-23' : Brown Silty clay			Solid 2" PVC Riser 0'-20' Bentonite fill chips 1'-18'
15					
20					
25					
30					
35					
40	Moisture in cuttings @ 40'	23-50': Brown fine sand with weathered saprolite			Sand 18'-50'
45					Slotted 2" PVC Screen 20'-50'
50					
	feet below ground surface	End of Borehole: 50'			

Remarks:

Synergy Environmental Inc.
Environmental Consultants
155 Railroad Plaza, 1st Floor
Royersford, PA 19468

Gatz Auto
2899 Holme Avenue
Philadelphia, Philadelphia County, Pennsylvania

Well Id.: **MW-5**
Page No.:
Project No.: 24-01483
Field Date: 2/24/2025

Subcontractor:	C.S. Garber	Objective:	Monitor Well Installations
Consultant:	RMH	Equipment:	Reich Air Rotary Rig, Air Rotary
Sampler:	N/A	Site elevation:	
Oversight:	MGR	Boring Location:	Southwest corner of property
Log Prepared by:	RMH	TOC Elevation:	

Groundwater Readings: (in feet, from TOC)

Date	Time	Depth

Depth	Comments	Lithologic Description	Stratigraphic Column	Well Diagram	Construction Details
5		0-5' Softdig			
10		5-15' : Brown Silty clay			Solid 2" PVC Riser 0'-23'
15					Bentonite fill chips 1'-23'
20		15-20': Brown sandy silt			
25		20-30': Brown silty sand			
30					
35					
40	Water @ 37'	30-50': Brown sandy silt with layers of brownish gray			Sand 23'-50'
45					Slotted 2" PVC Screen 25'-50'
50					
	feet below ground surface	End of Borehole: 50'			

Remarks:

Synergy Environmental Inc.
Environmental Consultants
155 Railroad Plaza, 1st Floor
Royersford, PA 19468

Gatz Auto
2899 Holme Avenue
Philadelphia, Philadelphia County, Pennsylvania

Well Id.: **MW-6**
Page No.:
Project No.: 24-01483
Field Date: 2/24/2025

Subcontractor:	C.S. Garber	Objective:	Monitor Well Installations
Consultant:	RMH	Equipment:	Reich Air Rotary Rig, Air Rotary
Sampler:	N/A	Site elevation:	
Oversight:	MGR	Boring Location:	West of building
Log Prepared by:	RMH	TOC Elevation:	

Groundwater Readings: (in feet, from TOC)

Date	Time	Depth

Depth	Comments	Lithologic Description	Stratigraphic Column	Well Diagram	Construction Details
5		0-5' Softdig			Solid 2" PVC Riser 0'-23'
10		5-15' : Brown Silty clay			Bentonite fill chips 1'-23'
15					
20					
25					
30					
35		15-49': Brown sandy silt			
40					Sand 23'-50'
45					Slotted 2" PVC Screen 25'-50'
50		49-50': Gray clayey silt			
	feet below ground surface	End of Borehole: 50'			

Remarks:

Synergy Environmental Inc.
Environmental Consultants
155 Railroad Plaza, 1st Floor
Royersford, PA 19468

Gatz Auto
2899 Holme Avenue
Philadelphia, Philadelphia County, Pennsylvania

Well Id.: **MW-7**
Page No.:
Project No.: 24-01483
Field Date: 2/25/2025

Subcontractor:	C.S. Garber	Objective:	Monitor Well Installations
Consultant:	RMH	Equipment:	Reich Air Rotary Rig, Air Rotary
Sampler:	N/A	Site elevation:	
Oversight:	RMH	Boring Location:	East of building
Log Prepared by:	RMH	TOC Elevation:	

Groundwater Readings: (in feet, from TOC)

Date	Time	Depth

Depth	Comments	Lithologic Description	Stratigraphic Column	Well Diagram	Construction Details
5		0-5' Softdig			
10		5-16' : Brown Silty clay with gravel			Solid 2" PVC Riser 0'-23' Bentonite fill chips 1'-23'
15					
20					
25		16-32': Light brown sandy silt			
30					
35		32-36': Gray weathered rock, possible schist			
40					Sand 23'-50'
45		36-50': Brown sandy silt with some saprolite			Slotted 2" PVC Screen 25'-50'
50					
	feet below ground surface	End of Borehole: 50'			

Remarks:

Synergy Environmental Inc. Environmental Consultants 155 Railroad Plaza, 1st Floor Royersford, PA 19468	**Gatz Auto** 2899 Holme Avenue Philadelphia, Philadelphia County, Pennsylvania	Well Id.: **MW-8** Page No.: Project No.: 24-01483 Field Date: 2/25/2025

				Groundwater Readings: (in feet, from TOC)		
Subcontractor:	C.S. Garber	Objective:	Monitor Well Installations	Date	Time	Depth
Consultant:	RMH	Equipment:	Reich Air Rotary Rig, Air Rotary			
Sampler:	N/A	Site elevation:				
Oversight:	RMH	Boring Location:	Northeast corner of property			
Log Prepared by:	RMH	TOC Elevation:				

Depth	Comments	Lithologic Description	Stratigraphic Column	Well Diagram	Construction Details
5		0-5' Softdig			
10		5-18' : Brown Silty clay			Solid 2" PVC Riser 0'-23' Bentonite fill chips 1'-23'
15					
20		18-32': Light brown sandy silt			
25					
30					
35		32-38': Gray weathered rock, possible schist			
40	Water @ 38'				Sand 23'-50'
45		38-50': Brown sandy silt with some saprolite			Slotted 2" PVC Screen 25'-50'
50					
	feet below ground surface	End of Borehole: 50'			

Remarks:

APPENDIX F

ALS Laboratory Groundwater Analytical Data – March 13, 2025

Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 |

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343, NJ PA101

Analytical Results Report For

Synergy Environmental, Inc.

Project Gatz Auto 24-01483
Workorder 3405452
Report ID 399310 on 3/24/2025 (Revised report. See Project Notations Section.)

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Mar 13, 2025.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Jessica Smith (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):
Synergy Environmental, Inc. - Synergy Environmental, Inc.
Ryan Houck - Synergy Environmental, Inc.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Jessica Smith

Jessica Smith *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3405452001	MW-1	Ground Water	03/13/2025 12:51	03/13/2025 20:15	CBC	Collected By Client
3405452002	MW-2	Ground Water	03/13/2025 11:43	03/13/2025 20:15	CBC	Collected By Client
3405452003	MW-3	Ground Water	03/13/2025 12:28	03/13/2025 20:15	CBC	Collected By Client
3405452004	MW-4	Ground Water	03/13/2025 12:06	03/13/2025 20:15	CBC	Collected By Client
3405452005	MW-5	Ground Water	03/13/2025 11:21	03/13/2025 20:15	CBC	Collected By Client
3405452006	MW-6	Ground Water	03/13/2025 10:58	03/13/2025 20:15	CBC	Collected By Client
3405452007	MW-7	Ground Water	03/13/2025 10:36	03/13/2025 20:15	CBC	Collected By Client
3405452008	MW-8	Ground Water	03/13/2025 10:15	03/13/2025 20:15	CBC	Collected By Client

Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:
  EPA 300.1 Rev. 1.0-1997
  EPA 300.0 Rev. 2.1-1993
  EPA 353.2 Rev. 2.0-1993
  EPA 410.4 Rev. 1.0-1993
  EPA 420.4 Rev. 1.0-1993
  EPA 365.1 Rev. 2.0-1993
  EPA 200.7 Rev. 4.4-1994
  EPA 200.8 Rev. 5.4-1994
  EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.

Detected Results Summary

Client Sample ID	MW-1	Collected	03/13/2025 12:51
Lab Sample ID	3405452001	Lab Receipt	03/13/2025 20:15

Compound	Result	Units	RDL	Method	Flag
VOLATILE ORGANICS					
Benzene	136	ug/L	10.0	SW846 8260B	#
Ethylbenzene	45.4	ug/L	10.0	SW846 8260B	#
Toluene	211	ug/L	10.0	SW846 8260B	#
Total Xylenes	109	ug/L	30.0	SW846 8260B	#

Detected Results Summary

Client Sample ID	MW-2	Collected	03/13/2025 11:43
Lab Sample ID	3405452002	Lab Receipt	03/13/2025 20:15

Compound	Result	Units	RDL	Method	Flag
VOLATILE ORGANICS					
1,2,4-Trimethylbenzene	30.8	ug/L	1.0	SW846 8260B	#
1,3,5-Trimethylbenzene	28.6	ug/L	1.0	SW846 8260B	#
Benzene	54.0	ug/L	1.0	SW846 8260B	#
Ethylbenzene	10.2	ug/L	1.0	SW846 8260B	#
Isopropylbenzene	11.3	ug/L	1.0	SW846 8260B	#
Methyl t-Butyl Ether	23.7	ug/L	1.0	SW846 8260B	#
Naphthalene	45.7	ug/L	2.0	SW846 8260B	#
Toluene	1.4	ug/L	1.0	SW846 8260B	#
Total Xylenes	35.4	ug/L	3.0	SW846 8260B	#

Detected Results Summary

Client Sample ID	MW-3	Collected	03/13/2025 12:28
Lab Sample ID	3405452003	Lab Receipt	03/13/2025 20:15

Compound	Result	Units	RDL	Method	Flag
VOLATILE ORGANICS					
Benzene	421	ug/L	5.0	SW846 8260B	#
Isopropylbenzene	3.0	ug/L	1.0	SW846 8260B	#
Methyl t-Butyl Ether	4.5	ug/L	1.0	SW846 8260B	#
Total Xylenes	21.2	ug/L	3.0	SW846 8260B	#

Detected Results Summary

Client Sample ID	MW-5	Collected	03/13/2025 11:21
Lab Sample ID	3405452005	Lab Receipt	03/13/2025 20:15

Compound	Result	Units	RDL	Method	Flag
VOLATILE ORGANICS					
1,2,4-Trimethylbenzene	198	ug/L	5.0	SW846 8260B	#
1,3,5-Trimethylbenzene	54.7	ug/L	1.0	SW846 8260B	#
Ethylbenzene	7.0	ug/L	1.0	SW846 8260B	#
Isopropylbenzene	12.3	ug/L	1.0	SW846 8260B	#
Methyl t-Butyl Ether	4.0	ug/L	1.0	SW846 8260B	#
Naphthalene	34.2	ug/L	2.0	SW846 8260B	#
Total Xylenes	43.1	ug/L	3.0	SW846 8260B	#

Results

Client Sample ID	MW-1	Collected	03/13/2025 12:51
Lab Sample ID	3405452001	Lab Receipt	03/13/2025 20:15

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/L	10.0	SW846 8260B	10	03/20/2025 22:42	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	10.0	SW846 8260B	10	03/20/2025 22:42	TMP	A
Benzene	136		ug/L	10.0	SW846 8260B	10	03/20/2025 22:42	TMP	A
Ethylbenzene	45.4		ug/L	10.0	SW846 8260B	10	03/20/2025 22:42	TMP	A
Isopropylbenzene	ND	ND	ug/L	10.0	SW846 8260B	10	03/20/2025 22:42	TMP	A
Methyl t-Butyl Ether	ND	ND	ug/L	10.0	SW846 8260B	10	03/20/2025 22:42	TMP	A
Naphthalene	ND	ND	ug/L	20.0	SW846 8260B	10	03/20/2025 22:42	TMP	A
Toluene	211		ug/L	10.0	SW846 8260B	10	03/20/2025 22:42	TMP	A
Total Xylenes	109		ug/L	30.0	SW846 8260B	10	03/20/2025 22:42	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.2%	62 – 133	03/20/2025 22:42	
4-Bromofluorobenzene	460-00-4	96.8%	79 – 114	03/20/2025 22:42	
Dibromofluoromethane	1868-53-7	99.5%	78 – 116	03/20/2025 22:42	
Toluene-d8	2037-26-5	95%	76 – 127	03/20/2025 22:42	

Results

Client Sample ID	MW-2	Collected	03/13/2025 11:43
Lab Sample ID	3405452002	Lab Receipt	03/13/2025 20:15

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	30.8		ug/L	1.0	SW846 8260B	1	03/20/2025 23:05	TMP	A
1,3,5-Trimethylbenzene	28.6		ug/L	1.0	SW846 8260B	1	03/20/2025 23:05	TMP	A
Benzene	54.0		ug/L	1.0	SW846 8260B	1	03/20/2025 23:05	TMP	A
Ethylbenzene	10.2		ug/L	1.0	SW846 8260B	1	03/20/2025 23:05	TMP	A
Isopropylbenzene	11.3		ug/L	1.0	SW846 8260B	1	03/20/2025 23:05	TMP	A
Methyl t-Butyl Ether	23.7		ug/L	1.0	SW846 8260B	1	03/20/2025 23:05	TMP	A
Naphthalene	45.7		ug/L	2.0	SW846 8260B	1	03/20/2025 23:05	TMP	A
Toluene	1.4		ug/L	1.0	SW846 8260B	1	03/20/2025 23:05	TMP	A
Total Xylenes	35.4		ug/L	3.0	SW846 8260B	1	03/20/2025 23:05	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.6%	62 – 133	03/20/2025 23:05	
4-Bromofluorobenzene	460-00-4	97.6%	79 – 114	03/20/2025 23:05	
Dibromofluoromethane	1868-53-7	98.3%	78 – 116	03/20/2025 23:05	
Toluene-d8	2037-26-5	98.2%	76 – 127	03/20/2025 23:05	

Results

Client Sample ID	MW-3	Collected	03/13/2025 12:28
Lab Sample ID	3405452003	Lab Receipt	03/13/2025 20:15

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/20/2025 23:28	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/20/2025 23:28	TMP	A
Benzene	421		ug/L	5.0	SW846 8260B	5	03/21/2025 12:00	JTH	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/20/2025 23:28	TMP	A
Isopropylbenzene	3.0		ug/L	1.0	SW846 8260B	1	03/20/2025 23:28	TMP	A
Methyl t-Butyl Ether	4.5		ug/L	1.0	SW846 8260B	1	03/20/2025 23:28	TMP	A
Naphthalene	ND	ND	ug/L	2.0	SW846 8260B	1	03/20/2025 23:28	TMP	A
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	03/20/2025 23:28	TMP	A
Total Xylenes	21.2		ug/L	3.0	SW846 8260B	1	03/20/2025 23:28	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.5%	62 – 133	03/21/2025 12:00	
1,2-Dichloroethane-d4	17060-07-0	103%	62 – 133	03/20/2025 23:28	
4-Bromofluorobenzene	460-00-4	95.6%	79 – 114	03/21/2025 12:00	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	03/20/2025 23:28	
Dibromofluoromethane	1868-53-7	98.8%	78 – 116	03/21/2025 12:00	
Dibromofluoromethane	1868-53-7	105%	78 – 116	03/20/2025 23:28	
Toluene-d8	2037-26-5	93%	76 – 127	03/21/2025 12:00	
Toluene-d8	2037-26-5	103%	76 – 127	03/20/2025 23:28	

Results

Client Sample ID	MW-4	Collected	03/13/2025 12:06
Lab Sample ID	3405452004	Lab Receipt	03/13/2025 20:15

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/20/2025 23:51	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/20/2025 23:51	TMP	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/20/2025 23:51	TMP	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/20/2025 23:51	TMP	A
Isopropylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/20/2025 23:51	TMP	A
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	SW846 8260B	1	03/20/2025 23:51	TMP	A
Naphthalene	ND	ND	ug/L	2.0	SW846 8260B	1	03/20/2025 23:51	TMP	A
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	03/20/2025 23:51	TMP	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	03/20/2025 23:51	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	03/20/2025 23:51	
4-Bromofluorobenzene	460-00-4	97.6%	79 – 114	03/20/2025 23:51	
Dibromofluoromethane	1868-53-7	102%	78 – 116	03/20/2025 23:51	
Toluene-d8	2037-26-5	96.2%	76 – 127	03/20/2025 23:51	

Results

Client Sample ID	MW-5	Collected	03/13/2025 11:21
Lab Sample ID	3405452005	Lab Receipt	03/13/2025 20:15

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	198		ug/L	5.0	SW846 8260B	5	03/21/2025 12:20	JTH	A
1,3,5-Trimethylbenzene	54.7		ug/L	1.0	SW846 8260B	1	03/21/2025 00:13	TMP	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 00:13	TMP	A
Ethylbenzene	7.0		ug/L	1.0	SW846 8260B	1	03/21/2025 00:13	TMP	A
Isopropylbenzene	12.3		ug/L	1.0	SW846 8260B	1	03/21/2025 00:13	TMP	A
Methyl t-Butyl Ether	4.0		ug/L	1.0	SW846 8260B	1	03/21/2025 00:13	TMP	A
Naphthalene	34.2		ug/L	2.0	SW846 8260B	1	03/21/2025 00:13	TMP	A
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 00:13	TMP	A
Total Xylenes	43.1		ug/L	3.0	SW846 8260B	1	03/21/2025 00:13	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	99.2%	62 – 133	03/21/2025 12:20	
1,2-Dichloroethane-d4	17060-07-0	98.6%	62 – 133	03/21/2025 00:13	
4-Bromofluorobenzene	460-00-4	100%	79 – 114	03/21/2025 12:20	
4-Bromofluorobenzene	460-00-4	94.4%	79 – 114	03/21/2025 00:13	
Dibromofluoromethane	1868-53-7	98.4%	78 – 116	03/21/2025 12:20	
Dibromofluoromethane	1868-53-7	97.5%	78 – 116	03/21/2025 00:13	
Toluene-d8	2037-26-5	97.8%	76 – 127	03/21/2025 12:20	
Toluene-d8	2037-26-5	95.9%	76 – 127	03/21/2025 00:13	

Results

Client Sample ID	MW-6	Collected	03/13/2025 10:58
Lab Sample ID	3405452006	Lab Receipt	03/13/2025 20:15

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 04:32	BST	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 04:32	BST	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 04:32	BST	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 04:32	BST	A
Isopropylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 04:32	BST	A
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 04:32	BST	A
Naphthalene	ND	ND	ug/L	2.0	SW846 8260B	1	03/21/2025 04:32	BST	A
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 04:32	BST	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	03/21/2025 04:32	BST	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	106%	62 – 133	03/21/2025 04:32	
4-Bromofluorobenzene	460-00-4	98.2%	79 – 114	03/21/2025 04:32	
Dibromofluoromethane	1868-53-7	105%	78 – 116	03/21/2025 04:32	
Toluene-d8	2037-26-5	97.8%	76 – 127	03/21/2025 04:32	

Results

Client Sample ID	MW-7	Collected	03/13/2025 10:36
Lab Sample ID	3405452007	Lab Receipt	03/13/2025 20:15

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 04:52	BST	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 04:52	BST	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 04:52	BST	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 04:52	BST	A
Isopropylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 04:52	BST	A
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 04:52	BST	A
Naphthalene	ND	ND	ug/L	2.0	SW846 8260B	1	03/21/2025 04:52	BST	A
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 04:52	BST	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	03/21/2025 04:52	BST	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	94.6%	62 – 133	03/21/2025 04:52	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	03/21/2025 04:52	
Dibromofluoromethane	1868-53-7	93.3%	78 – 116	03/21/2025 04:52	
Toluene-d8	2037-26-5	92.9%	76 – 127	03/21/2025 04:52	

Results

Client Sample ID	MW-8	Collected	03/13/2025 10:15
Lab Sample ID	3405452008	Lab Receipt	03/13/2025 20:15

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 05:12	BST	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 05:12	BST	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 05:12	BST	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 05:12	BST	A
Isopropylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 05:12	BST	A
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 05:12	BST	A
Naphthalene	ND	ND	ug/L	2.0	SW846 8260B	1	03/21/2025 05:12	BST	A
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	03/21/2025 05:12	BST	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	03/21/2025 05:12	BST	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	03/21/2025 05:12	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	03/21/2025 05:12	
Dibromofluoromethane	1868-53-7	99.9%	78 – 116	03/21/2025 05:12	
Toluene-d8	2037-26-5	97.9%	76 – 127	03/21/2025 05:12	

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3405452001	MW-1	SW846 8260B	N/A	
3405452002	MW-2	SW846 8260B	N/A	
3405452003	MW-3	SW846 8260B	N/A	
		SW846 8260B	N/A	
3405452004	MW-4	SW846 8260B	N/A	
3405452005	MW-5	SW846 8260B	N/A	
		SW846 8260B	N/A	
3405452006	MW-6	SW846 8260B	N/A	
3405452007	MW-7	SW846 8260B	N/A	
3405452008	MW-8	SW846 8260B	N/A	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3405452001	MW-1	N/A	N/A	N/A		SW846 8260B	1409807
3405452002	MW-2	N/A	N/A	N/A		SW846 8260B	1409807
3405452003	MW-3	N/A	N/A	N/A		SW846 8260B	1409979
		N/A	N/A	N/A		SW846 8260B	1409807
3405452004	MW-4	N/A	N/A	N/A		SW846 8260B	1409807
3405452005	MW-5	N/A	N/A	N/A		SW846 8260B	1409979
		N/A	N/A	N/A		SW846 8260B	1409807
3405452006	MW-6	N/A	N/A	N/A		SW846 8260B	1409864
3405452007	MW-7	N/A	N/A	N/A		SW846 8260B	1409864
3405452008	MW-8	N/A	N/A	N/A		SW846 8260B	1409864

301 Fulling Mill Rd, Suite A
Middletown, PA 17057
P. 717-944-5541

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 3405452 | Logged By: DXB | PM: JLS | 1 of 1

ALS Quc

Client Name: Synergy

Address: 155 Railroad Plaza

Contact: Ryan Houck

Phone#:

Project Name/#: Gatz Auto 24-61483

Bill To:

Purchase Order #:

TAT: [x] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required: Approved?

Email? [x] rhouck@synergyenv.com

	Container Type	Container Size	Preservative								
	G	40ml	HCl	DM 3/13/25							

Orthophosphate Filtered? Yes No Hexavalent Chromium Filtered? Yes No

ANALYSIS / METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	*G or C	**Matrix (See bottom of COC)	RAUG								
							Enter Number of Containers Per Sample or Field Results Below.								
1	MW-1	3/13/25	1251			G	X								
2	MW-2		1143				X								
3	MW-3		1228				X								
4	MW-4		1206				X								
5	MW-5		1121				X								
6	MW-6		1058				X								
7	MW-7		1036				X								
8	MW-8		1015				X								
9															
10															

DM 3/13/25

Circle Sample Collector: ALS Tech / Client

Name: RMH ID:

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
3/13/25	1535	1	Synergy	2	ALS
3-13-25	1540	3	ALS	4	ALS
3/13/25	2015	5		6	MNTS
		7		8	
		9		10	

Temp Taken (, Temp (°C)

Receipt Info completed by: WV Containers 0-6°C Y N NA

Cooler Custody Seals Intact	Y	N	NA	Deviations? NO YES
Sample Custody Seal Intact	Y	N	NA	If YES, list below
Received on Ice	Y	N	NA	
Coolers & Samples Intact	Y	N		
Correct Containers Provided	Y	N		
Sample Label/COC Agree	Y	N		
Adequate Sample Volumes	Y	N		
VOA only: Trip Blank	Y	N	NA	

NJ ≤ 4 days? Y N

Courier/Tracking #

Client contact: Date/Tech

Sample(s) for Radiation testing? Y N Rad Screen (uCi)

Reportable SDWA Sample(s)? Y N New Source? Y N

SDWA State of Origin? New Source Contact:

PWSID #

PWS Contact: PWS Phone #:

SDWA Sample Type Key: D=Distribution E=Entry Point R=Raw P=Plant C=Check S=Special A=Annual Startup

Sample/COC Remarks

Contains Short Hold Testing YES NO

Internal Use: If less than 48 hours - notify lab upon receipt

Data Deliverables: [ ] Standard Lvl 1 [ ] Standard Lvl 2 [ ] Standard Lvl 3 [ ] Standard Lvl 4 [ ] CLP-like [ ] DOD [ ] NJ RED [ ] NJ Full [ ] HSCA [ ] Landfill [ ] NJ GW [ ] _____

EDDs: [ ] Excel Summary [ ] Equis [ ] Custom

Sample Disposal: Lab [ ] Special [ ]

EDDS: Format Type

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] WV [ ] FL [ ] other

* G=Grab; C=Composite **Matrix - A=Air; D=Drinking Water; GW=Groundwater; O=Oil; LW=Liquid Waste; S=Solid/Soil/Sludge; SW=Surface Water; WP=Wipe; WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Suite A, Middletown, PA 17057

Rev 07.06.2023

Middletown Sample Condition Form

Client Synergy Workorder 3405452

Temp °C 2 Therm ID 352 Ice? (Y) N N/A Initials & Date LW 3/4/25

Fedex UPS Client (ALS) Other Tracking # _____

	Yes	No[1]	N/A	Comments
Cooler Custody Seals present & intact	X			
Sample Custody Seals present & intact			X	
Chain-of-Custody present	X			
Sample collector name present *If not present, must contact PM/client to request name.*	X			
COC/bottle labels complete & in agreement		X		
•Sample location	X			
•Date and time of sample collection	X			
•Type(s) of preservation		X		
•Number of containers		X		UC
•Composite or grab		X		
•Matrix	X			
Proper containers, preservation, and volume per method	X			
Received within hold time	X			
Containers intact	X			
Trip blanks present (EPA 504, EPA 524)			X	
Field blanks present (Hg 1631, PFAS)				
NJ ≤ 4 Days				
CR6 Samples Filtered				
OP Samples Filtered				
WV Containers 0-6°C				
SDWA compliance reporting				

[1] *If No, provide comment*

Rad Screen (uCi) _____

PM - PM to contact client
N/A - Not Applicable
UC - Updated coc with missing information

Review Comments:

_____

_____

_____

APPENDIX G

ALS Laboratory Groundwater Analytical Data – April 9, 2025

Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 |

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343, NJ PA101

Analytical Results Report For **Synergy Environmental, Inc.**

Project Gatz Auto 24-01483
Workorder 3409907
Report ID 411616 on 4/28/2025

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Apr 09, 2025.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Jessica Smith (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):
Synergy Environmental, Inc. - Synergy Environmental, Inc.
Ryan Houck - Synergy Environmental, Inc.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Jessica Smith

Jessica Smith *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3409907001	MW-1	Ground Water	04/09/2025 10:55	04/09/2025 20:35	CBC	Collected By Client
3409907002	MW-2	Ground Water	04/09/2025 11:50	04/09/2025 20:35	CBC	Collected By Client
3409907003	MW-3	Ground Water	04/09/2025 11:08	04/09/2025 20:35	CBC	Collected By Client
3409907004	MW-4	Ground Water	04/09/2025 10:40	04/09/2025 20:35	CBC	Collected By Client
3409907005	MW-5	Ground Water	04/09/2025 12:05	04/09/2025 20:35	CBC	Collected By Client
3409907006	MW-6	Ground Water	04/09/2025 12:00	04/09/2025 20:35	CBC	Collected By Client
3409907007	MW-7	Ground Water	04/09/2025 10:17	04/09/2025 20:35	CBC	Collected By Client
3409907008	MW-8	Ground Water	04/09/2025 10:45	04/09/2025 20:35	CBC	Collected By Client

Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:
  EPA 300.1 Rev. 1.0-1997
  EPA 300.0 Rev. 2.1-1993
  EPA 353.2 Rev. 2.0-1993
  EPA 410.4 Rev. 1.0-1993
  EPA 420.4 Rev. 1.0-1993
  EPA 365.1 Rev. 2.0-1993
  EPA 200.7 Rev. 4.4-1994
  EPA 200.8 Rev. 5.4-1994
  EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

Project Notations

Sample Notations

Lab ID	Sample ID		
3409907001	MW-1	S1	The 8260B analysis of this sample was initially run within holding time. Re-analysis at a dilution from a previously analyzed vial with headspace was conducted past the fourteen day sample holding time.

Result Notations

Notation Ref.

Detected Results Summary

Client Sample ID	MW-1	Collected	04/09/2025 10:55
Lab Sample ID	3409907001	Lab Receipt	04/09/2025 20:35

Compound	Result	Units	RDL	MDL	Method	Flag
VOLATILE ORGANICS						
1,2,4-Trimethylbenzene	11.6	ug/L	1.0	0.25	SW846 8260B	#
1,3,5-Trimethylbenzene	4.5	ug/L	1.0	0.20	SW846 8260B	#
Benzene	98.6	ug/L	1.0	0.23	SW846 8260B	#
Ethylbenzene	29.4	ug/L	1.0	0.34	SW846 8260B	#
Isopropylbenzene	2.3	ug/L	1.0	0.22	SW846 8260B	#
Methyl t-Butyl Ether	0.66J	ug/L	1.0	0.33	SW846 8260B	#
Toluene	196	ug/L	50.0	11.5	SW846 8260B	#
Total Xylenes	165	ug/L	3.0	0.66	SW846 8260B	#

Detected Results Summary

Client Sample ID	MW-2	Collected	04/09/2025 11:50
Lab Sample ID	3409907002	Lab Receipt	04/09/2025 20:35

Compound	Result	Units	RDL	MDL	Method	Flag
VOLATILE ORGANICS						
1,2,4-Trimethylbenzene	23.3	ug/L	1.0	0.25	SW846 8260B	#
1,3,5-Trimethylbenzene	22.3	ug/L	1.0	0.20	SW846 8260B	#
Benzene	48.6	ug/L	1.0	0.23	SW846 8260B	#
Ethylbenzene	8.0	ug/L	1.0	0.34	SW846 8260B	#
Isopropylbenzene	8.0	ug/L	1.0	0.22	SW846 8260B	#
Methyl t-Butyl Ether	26.6	ug/L	1.0	0.33	SW846 8260B	#
Naphthalene	29.6	ug/L	2.0	0.34	SW846 8260B	#
Toluene	1.4	ug/L	1.0	0.23	SW846 8260B	#
Total Xylenes	28.5	ug/L	3.0	0.66	SW846 8260B	#

Detected Results Summary

Client Sample ID	MW-3	Collected	04/09/2025 11:08
Lab Sample ID	3409907003	Lab Receipt	04/09/2025 20:35

Compound	Result	Units	RDL	MDL	Method	Flag
VOLATILE ORGANICS						
Benzene	416	ug/L	5.0	1.2	SW846 8260B	#
Isopropylbenzene	3.4J	ug/L	5.0	1.1	SW846 8260B	#
Methyl t-Butyl Ether	5.0J	ug/L	5.0	1.7	SW846 8260B	#
Total Xylenes	21.8	ug/L	15.0	3.3	SW846 8260B	#

Detected Results Summary

Client Sample ID	MW-4	Collected	04/09/2025 10:40
Lab Sample ID	3409907004	Lab Receipt	04/09/2025 20:35

Compound	Result	Units	RDL	MDL	Method	Flag
VOLATILE ORGANICS						
Methyl t-Butyl Ether	0.84J	ug/L	1.0	0.33	SW846 8260B	#

Detected Results Summary

Client Sample ID	MW-5	Collected	04/09/2025 12:05
Lab Sample ID	3409907005	Lab Receipt	04/09/2025 20:35

Compound	Result	Units	RDL	MDL	Method	Flag
VOLATILE ORGANICS						
1,2,4-Trimethylbenzene	166	ug/L	5.0	1.3	SW846 8260B	#
1,3,5-Trimethylbenzene	49.8	ug/L	5.0	1.0	SW846 8260B	#
Ethylbenzene	5.5	ug/L	5.0	1.7	SW846 8260B	#
Isopropylbenzene	13.4	ug/L	5.0	1.1	SW846 8260B	#
Methyl t-Butyl Ether	2.0J	ug/L	5.0	1.7	SW846 8260B	#
Naphthalene	22.0	ug/L	10.0	1.7	SW846 8260B	#
Toluene	1.4J	ug/L	5.0	1.2	SW846 8260B	#
Total Xylenes	23.5	ug/L	15.0	3.3	SW846 8260B	#

Detected Results Summary

Client Sample ID	MW-6	Collected	04/09/2025 12:00
Lab Sample ID	3409907006	Lab Receipt	04/09/2025 20:35

Compound	Result	Units	RDL	MDL	Method	Flag
VOLATILE ORGANICS						
1,2,4-Trimethylbenzene	0.77J	ug/L	1.0	0.25	SW846 8260B	#
1,3,5-Trimethylbenzene	0.28J	ug/L	1.0	0.20	SW846 8260B	#
Benzene	1.3	ug/L	1.0	0.23	SW846 8260B	#
Ethylbenzene	1.1	ug/L	1.0	0.34	SW846 8260B	#
Isopropylbenzene	0.76J	ug/L	1.0	0.22	SW846 8260B	#
Toluene	12.7	ug/L	1.0	0.23	SW846 8260B	#
Total Xylenes	13.2	ug/L	3.0	0.66	SW846 8260B	#

Detected Results Summary

Client Sample ID	MW-7	Collected	04/09/2025 10:17
Lab Sample ID	3409907007	Lab Receipt	04/09/2025 20:35

Compound	Result	Units	RDL	MDL	Method	Flag
VOLATILE ORGANICS						
Methyl t-Butyl Ether	0.42J	ug/L	1.0	0.33	SW846 8260B	#

Results

Client Sample ID	MW-1	Collected	04/09/2025 10:55
Lab Sample ID	3409907001	Lab Receipt	04/09/2025 20:35

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	11.6	S1	ug/L	1.0	0.25	SW846 8260B	1	04/15/2025 15:37	TMP	B
1,3,5-Trimethylbenzene	4.5	S1	ug/L	1.0	0.20	SW846 8260B	1	04/15/2025 15:37	TMP	B
Benzene	98.6	S1	ug/L	1.0	0.23	SW846 8260B	1	04/15/2025 15:37	TMP	B
Ethylbenzene	29.4	S1	ug/L	1.0	0.34	SW846 8260B	1	04/15/2025 15:37	TMP	B
Isopropylbenzene	2.3	S1	ug/L	1.0	0.22	SW846 8260B	1	04/15/2025 15:37	TMP	B
Methyl t-Butyl Ether	0.66J	J,S1	ug/L	1.0	0.33	SW846 8260B	1	04/15/2025 15:37	TMP	B
Naphthalene	ND	ND,S1	ug/L	2.0	0.34	SW846 8260B	1	04/15/2025 15:37	TMP	B
Toluene	196	S1	ug/L	50.0	11.5	SW846 8260B	50	04/24/2025 18:14	TMP	B
Total Xylenes	165	S1	ug/L	3.0	0.66	SW846 8260B	1	04/15/2025 15:37	TMP	B

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	99.8%	62 – 133	04/24/2025 18:14	
1,2-Dichloroethane-d4	17060-07-0	98.5%	62 – 133	04/15/2025 15:37	
4-Bromofluorobenzene	460-00-4	105%	79 – 114	04/24/2025 18:14	
4-Bromofluorobenzene	460-00-4	97.6%	79 – 114	04/15/2025 15:37	
Dibromofluoromethane	1868-53-7	94.2%	78 – 116	04/24/2025 18:14	
Dibromofluoromethane	1868-53-7	95.8%	78 – 116	04/15/2025 15:37	
Toluene-d8	2037-26-5	96.9%	76 – 127	04/24/2025 18:14	
Toluene-d8	2037-26-5	98.9%	76 – 127	04/15/2025 15:37	

Results

Client Sample ID	MW-2	Collected	04/09/2025 11:50
Lab Sample ID	3409907002	Lab Receipt	04/09/2025 20:35

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	23.3		ug/L	1.0	0.25	SW846 8260B	1	04/15/2025 16:00	TMP	B
1,3,5-Trimethylbenzene	22.3		ug/L	1.0	0.20	SW846 8260B	1	04/15/2025 16:00	TMP	B
Benzene	48.6		ug/L	1.0	0.23	SW846 8260B	1	04/15/2025 16:00	TMP	B
Ethylbenzene	8.0		ug/L	1.0	0.34	SW846 8260B	1	04/15/2025 16:00	TMP	B
Isopropylbenzene	8.0		ug/L	1.0	0.22	SW846 8260B	1	04/15/2025 16:00	TMP	B
Methyl t-Butyl Ether	26.6		ug/L	1.0	0.33	SW846 8260B	1	04/15/2025 16:00	TMP	B
Naphthalene	29.6		ug/L	2.0	0.34	SW846 8260B	1	04/15/2025 16:00	TMP	B
Toluene	1.4		ug/L	1.0	0.23	SW846 8260B	1	04/15/2025 16:00	TMP	B
Total Xylenes	28.5		ug/L	3.0	0.66	SW846 8260B	1	04/15/2025 16:00	TMP	B

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95.7%	62 – 133	04/15/2025 16:00	
4-Bromofluorobenzene	460-00-4	97.3%	79 – 114	04/15/2025 16:00	
Dibromofluoromethane	1868-53-7	92.4%	78 – 116	04/15/2025 16:00	
Toluene-d8	2037-26-5	97.2%	76 – 127	04/15/2025 16:00	

Results

Client Sample ID	MW-3	Collected	04/09/2025 11:08
Lab Sample ID	3409907003	Lab Receipt	04/09/2025 20:35

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/L	5.0	1.3	SW846 8260B	5	04/15/2025 18:19	TMP	B
1,3,5-Trimethylbenzene	ND	ND	ug/L	5.0	1.0	SW846 8260B	5	04/15/2025 18:19	TMP	B
Benzene	416		ug/L	5.0	1.2	SW846 8260B	5	04/15/2025 18:19	TMP	B
Ethylbenzene	ND	ND	ug/L	5.0	1.7	SW846 8260B	5	04/15/2025 18:19	TMP	B
Isopropylbenzene	3.4J	J	ug/L	5.0	1.1	SW846 8260B	5	04/15/2025 18:19	TMP	B
Methyl t-Butyl Ether	5.0J	J	ug/L	5.0	1.7	SW846 8260B	5	04/15/2025 18:19	TMP	B
Naphthalene	ND	ND	ug/L	10.0	1.7	SW846 8260B	5	04/15/2025 18:19	TMP	B
Toluene	ND	ND	ug/L	5.0	1.2	SW846 8260B	5	04/15/2025 18:19	TMP	B
Total Xylenes	21.8		ug/L	15.0	3.3	SW846 8260B	5	04/15/2025 18:19	TMP	B

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	89.7%	62 – 133	04/15/2025 18:19	
4-Bromofluorobenzene	460-00-4	88.2%	79 – 114	04/15/2025 18:19	
Dibromofluoromethane	1868-53-7	87.9%	78 – 116	04/15/2025 18:19	
Toluene-d8	2037-26-5	86.5%	76 – 127	04/15/2025 18:19	

Results

Client Sample ID	MW-4	Collected	04/09/2025 10:40
Lab Sample ID	3409907004	Lab Receipt	04/09/2025 20:35

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/L	1.0	0.25	SW846 8260B	1	04/15/2025 16:23	TMP	B
1,3,5-Trimethylbenzene	ND	ND	ug/L	1.0	0.20	SW846 8260B	1	04/15/2025 16:23	TMP	B
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	04/15/2025 16:23	TMP	B
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260B	1	04/15/2025 16:23	TMP	B
Isopropylbenzene	ND	ND	ug/L	1.0	0.22	SW846 8260B	1	04/15/2025 16:23	TMP	B
Methyl t-Butyl Ether	0.84J	J	ug/L	1.0	0.33	SW846 8260B	1	04/15/2025 16:23	TMP	B
Naphthalene	ND	ND	ug/L	2.0	0.34	SW846 8260B	1	04/15/2025 16:23	TMP	B
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	04/15/2025 16:23	TMP	B
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260B	1	04/15/2025 16:23	TMP	B

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.2%	62 – 133	04/15/2025 16:23	
4-Bromofluorobenzene	460-00-4	93.4%	79 – 114	04/15/2025 16:23	
Dibromofluoromethane	1868-53-7	93.1%	78 – 116	04/15/2025 16:23	
Toluene-d8	2037-26-5	92.6%	76 – 127	04/15/2025 16:23	

Results

Client Sample ID	MW-5	Collected	04/09/2025 12:05
Lab Sample ID	3409907005	Lab Receipt	04/09/2025 20:35

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	166		ug/L	5.0	1.3	SW846 8260B	5	04/15/2025 18:42	TMP	B
1,3,5-Trimethylbenzene	49.8		ug/L	5.0	1.0	SW846 8260B	5	04/15/2025 18:42	TMP	B
Benzene	ND	ND	ug/L	5.0	1.2	SW846 8260B	5	04/15/2025 18:42	TMP	B
Ethylbenzene	5.5		ug/L	5.0	1.7	SW846 8260B	5	04/15/2025 18:42	TMP	B
Isopropylbenzene	13.4		ug/L	5.0	1.1	SW846 8260B	5	04/15/2025 18:42	TMP	B
Methyl t-Butyl Ether	2.0J	J	ug/L	5.0	1.7	SW846 8260B	5	04/15/2025 18:42	TMP	B
Naphthalene	22.0		ug/L	10.0	1.7	SW846 8260B	5	04/15/2025 18:42	TMP	B
Toluene	1.4J	J	ug/L	5.0	1.2	SW846 8260B	5	04/15/2025 18:42	TMP	B
Total Xylenes	23.5		ug/L	15.0	3.3	SW846 8260B	5	04/15/2025 18:42	TMP	B

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	91.3%	62 – 133	04/15/2025 18:42	
4-Bromofluorobenzene	460-00-4	89.2%	79 – 114	04/15/2025 18:42	
Dibromofluoromethane	1868-53-7	89.1%	78 – 116	04/15/2025 18:42	
Toluene-d8	2037-26-5	88.5%	76 – 127	04/15/2025 18:42	

Results

Client Sample ID	MW-6	Collected	04/09/2025 12:00
Lab Sample ID	3409907006	Lab Receipt	04/09/2025 20:35

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	0.77J	J	ug/L	1.0	0.25	SW846 8260B	1	04/15/2025 16:47	TMP	B
1,3,5-Trimethylbenzene	0.28J	J	ug/L	1.0	0.20	SW846 8260B	1	04/15/2025 16:47	TMP	B
Benzene	1.3		ug/L	1.0	0.23	SW846 8260B	1	04/15/2025 16:47	TMP	B
Ethylbenzene	1.1		ug/L	1.0	0.34	SW846 8260B	1	04/15/2025 16:47	TMP	B
Isopropylbenzene	0.76J	J	ug/L	1.0	0.22	SW846 8260B	1	04/15/2025 16:47	TMP	B
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260B	1	04/15/2025 16:47	TMP	B
Naphthalene	ND	ND	ug/L	2.0	0.34	SW846 8260B	1	04/15/2025 16:47	TMP	B
Toluene	12.7		ug/L	1.0	0.23	SW846 8260B	1	04/15/2025 16:47	TMP	B
Total Xylenes	13.2		ug/L	3.0	0.66	SW846 8260B	1	04/15/2025 16:47	TMP	B

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92.9%	62 – 133	04/15/2025 16:47	
4-Bromofluorobenzene	460-00-4	91.7%	79 – 114	04/15/2025 16:47	
Dibromofluoromethane	1868-53-7	90.2%	78 – 116	04/15/2025 16:47	
Toluene-d8	2037-26-5	90.5%	76 – 127	04/15/2025 16:47	

Results

Client Sample ID	MW-7	Collected	04/09/2025 10:17
Lab Sample ID	3409907007	Lab Receipt	04/09/2025 20:35

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/L	1.0	0.25	SW846 8260B	1	04/12/2025 18:26	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	1.0	0.20	SW846 8260B	1	04/12/2025 18:26	TMP	A
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	04/12/2025 18:26	TMP	A
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260B	1	04/12/2025 18:26	TMP	A
Isopropylbenzene	ND	ND	ug/L	1.0	0.22	SW846 8260B	1	04/12/2025 18:26	TMP	A
Methyl t-Butyl Ether	0.42J	J	ug/L	1.0	0.33	SW846 8260B	1	04/12/2025 18:26	TMP	A
Naphthalene	ND	ND	ug/L	2.0	0.34	SW846 8260B	1	04/12/2025 18:26	TMP	A
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	04/12/2025 18:26	TMP	A
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260B	1	04/12/2025 18:26	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	04/12/2025 18:26	
4-Bromofluorobenzene	460-00-4	98.3%	79 – 114	04/12/2025 18:26	
Dibromofluoromethane	1868-53-7	101%	78 – 116	04/12/2025 18:26	
Toluene-d8	2037-26-5	98.4%	76 – 127	04/12/2025 18:26	

Results

Client Sample ID	MW-8	Collected	04/09/2025 10:45
Lab Sample ID	3409907008	Lab Receipt	04/09/2025 20:35

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4-Trimethylbenzene	ND	ND	ug/L	1.0	0.25	SW846 8260B	1	04/12/2025 19:12	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	1.0	0.20	SW846 8260B	1	04/12/2025 19:12	TMP	A
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	04/12/2025 19:12	TMP	A
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260B	1	04/12/2025 19:12	TMP	A
Isopropylbenzene	ND	ND	ug/L	1.0	0.22	SW846 8260B	1	04/12/2025 19:12	TMP	A
Methyl t-Butyl Ether	ND	ND	ug/L	1.0	0.33	SW846 8260B	1	04/12/2025 19:12	TMP	A
Naphthalene	ND	ND	ug/L	2.0	0.34	SW846 8260B	1	04/12/2025 19:12	TMP	A
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260B	1	04/12/2025 19:12	TMP	A
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260B	1	04/12/2025 19:12	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97%	62 – 133	04/12/2025 19:12	
4-Bromofluorobenzene	460-00-4	93.6%	79 – 114	04/12/2025 19:12	
Dibromofluoromethane	1868-53-7	97%	78 – 116	04/12/2025 19:12	
Toluene-d8	2037-26-5	95.4%	76 – 127	04/12/2025 19:12	

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3409907001	MW-1	SW846 8260B	N/A	
		SW846 8260B	N/A	
3409907002	MW-2	SW846 8260B	N/A	
3409907003	MW-3	SW846 8260B	N/A	
3409907004	MW-4	SW846 8260B	N/A	
3409907005	MW-5	SW846 8260B	N/A	
3409907006	MW-6	SW846 8260B	N/A	
3409907007	MW-7	SW846 8260B	N/A	
3409907008	MW-8	SW846 8260B	N/A	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3409907001	MW-1	N/A	N/A	N/A		SW846 8260B	1425594
		N/A	N/A	N/A		SW846 8260B	1423809
3409907002	MW-2	N/A	N/A	N/A		SW846 8260B	1423809
3409907003	MW-3	N/A	N/A	N/A		SW846 8260B	1423809
3409907004	MW-4	N/A	N/A	N/A		SW846 8260B	1423809
3409907005	MW-5	N/A	N/A	N/A		SW846 8260B	1423809
3409907006	MW-6	N/A	N/A	N/A		SW846 8260B	1423809
3409907007	MW-7	N/A	N/A	N/A		SW846 8260B	1423077
3409907008	MW-8	N/A	N/A	N/A		SW846 8260B	1423077

301 Fulling Mill Rd, Suite A
Middletown, PA 17057
P. 717-944-5541

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 3409907 | Logged By: CXW | PM: JLS | 1 of 1

ALS Quote #:

Client Name: Synergy Environmental Inc

Address: 155 Railroad Plaza Royersford PA

Contact: Ryan Houck

Phone#:

Project Name/#: Gate Auto 24-01483

Bill To:

Purchase Order #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required: Approved?

Email? [X] rhoucke@synergyenvinc.com

Temp Taken By: °C 6.0

Receipt Info completed by:

WV Containers 0-6°C Y N NA

Cooler Custody Seals Intact	Y	N	NA
Sample Custody Seal Intact	Y	N	NA
Received on Ice	Y	N	NA
Coolers & Samples Intact	Y	N	
Correct Containers Provided	Y	N	
Sample Label/COC Agree	Y	N	
Adequate Sample Volumes	Y	N	
VOA only: Trip Blank	Y	N	NA
NJ ≤ 4 days?	Y	N	

Courier/Tracking #

Deviations? NO YES

If YES, list below:

Client contact:

Date/Tech:

Sample(s) for Radiation testing? Y N Rad Screen (uCi)

Reportable SDWA Sample(s)? Y N New Source? Y N

SDWA State of Origin? New Source Contact:

PWSID #

PWS Contact: PWS Phone #:

SDWA Sample Type Key: D=Distribution E=Entry Point R=Raw P=Plant C=Check S=Special A=Annual Startup

Sample/COC Remarks

Contains Short Hold Testing YES NO

Internal Use: If less than 48 hours - notify lab upon receipt

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see Key)	*G or C	**Matrix (See bottom of COC)	Container Type	Container Size	Preservative	PAHs (Green Cap)									
							Enter Number of Containers Per Sample or Field Results Below.												
1	MW-1	4-9-25	1055			W	G	40 mL	HCl	2									
2	MW-2	"	1150			"	"	"	"	2									
3	MW-3	"	1108			"	"	"	"	2									
4	MW-4	"	1040			"	"	"	"	2									
5	MW-5	"	1205			"	"	"	"	2									
6	MW-6	"	1200			"	"	"	"	2									
7	MW-7	"	1017			"	"	"	"	2									
8	MW-8	"	1045			W	"	"	"	2									
9																			
10																			

Orthophosphate Filtered? Yes No Hexavalent Chromium Filtered? Yes No

ANALYSIS / METHOD REQUESTED

Circle Sample Collector: ALS Tech / Client

Name: ID:

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
4-9-25	1930	1	Synergy	2	
4/9/25	1620	3		4	ALS
4/9/25	2035	5	ALS	6	MRTS
		7		8	
		9		10	

Data Deliverables: [ ] Standard Lvl 1 [ ] Standard Lvl 2 [ ] Standard Lvl 3 [ ] Standard Lvl 4 [ ] CLP-like [ ] DOD [ ] NJ RED [ ] NJ Full [ ] HSCA [ ] Landfill [ ] NJ GW

EDDs: [ ] Excel Summary [ ] Equis [ ] Custom

Sample Disposal: [ ] Lab [ ] Special

EDDS: Format Type

State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] WV [ ] FL [ ] other

* G=Grab; C=Composite **Matrix - A=Air; D=Drinking Water; GW=Groundwater; O=Oil; LW=Liquid Waste; S=Solid/Soil/Sludge; SW=Surface Water; WP=Wipe; WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Suite A, Middletown, PA 17057

Rev 07.06.2023

Middletown Sample Condition Form

Client: Synergy Environmental Workorder: _____

Temp °C: 6 Therm ID: 569 Ice? (Y) N N/A Initials & Date: MP 4/9/25

Fedex UPS Client (ALS) Other Tracking #: _____

	Yes	No[1]	N/A	Comments
Cooler Custody Seals present & intact	✓			
Sample Custody Seals present & intact			✓	
Chain-of-Custody present	✓			
Sample collector name present *If not present, must contact PM/client to request name.*		✓		PM
COC/bottle labels complete & in agreement		✓		
•Sample location	✓			
•Date and time of sample collection	✓			
•Type(s) of preservation	✓			
•Number of containers	✓			
•Composite or grab		✓		
•Matrix	✓			
Proper containers, preservation, and volume per method	↓			
Received within hold time	↓			
Containers intact	↓			
Trip blanks present (EPA 504, EPA 524)			✓	
Field blanks present (Hg 1631, PFAS)			↓	
NJ ≤ 4 Days			↓	
CR6 Samples Filtered			↓	
OP Samples Filtered			↓	
WV Containers 0-6°C			↓	
SDWA compliance reporting			↓	

[1] *If No, provide comment*

Rad Screen (uCi) _____

PM - PM to contact client
N/A - Not Applicable
UC - Updated coc with missing information

Review Comments:

_____

_____

_____

APPENDIX H

Pennsylvania Natural Diversity Inventory Sheet

1. PROJECT INFORMATION

Project Name: **Gatz Auto**
Date of Review: **5/27/2025 03:08:34 PM**
Project Category: **Hazardous Waste Clean-up, Site Remediation, and Reclamation, Voluntary cleanup (Act 2 and Chapter 250)**
Project Area: **0.36 acres**
County(s): **Philadelphia**
Township/Municipality(s): **Philadelphia City**
ZIP Code:
Quadrangle Name(s): **FRANKFORD**
Watersheds HUC 8: **Lower Delaware**
Watersheds HUC 12: **Lower Pennypack Creek**
Decimal Degrees: **40.056811, -75.029087**
Degrees Minutes Seconds: **40° 3' 24.5185" N, 75° 1' 44.7148" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	**Potential Impact**	**FURTHER REVIEW IS REQUIRED, See Agency Response**
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

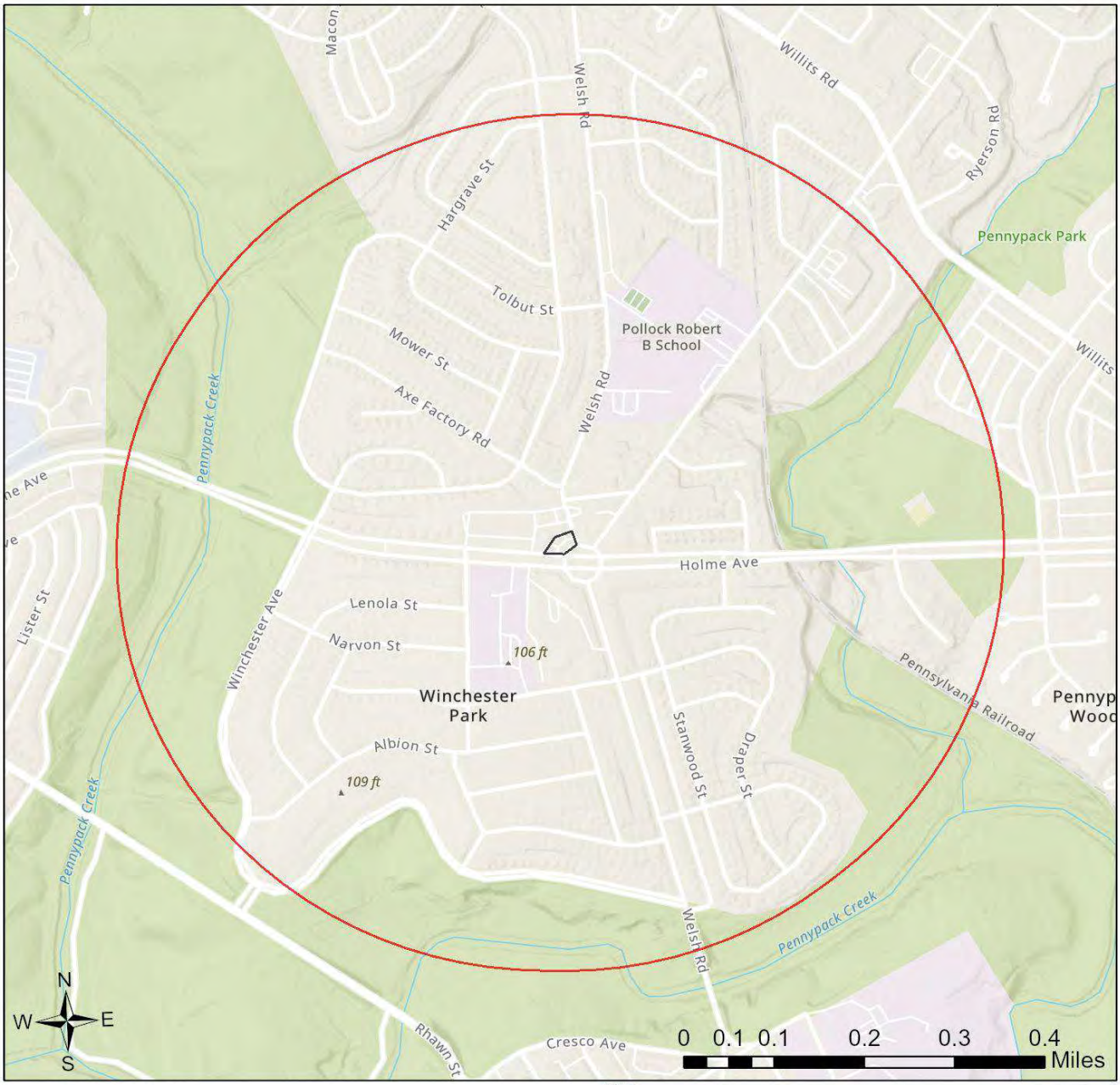
Gatz Auto

Buffered Project Boundary

Project Boundary

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Gatz Auto



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
Sources: Esri, Maxar, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA,

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jursidictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PFBC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Sensitive Species**		Threatened

U.S. Fish and Wildlife Service

RESPONSE:

No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.
** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email the following information to the agency(s) (see AGENCY CONTACT INFORMATION). Instructions for uploading project materials can be found here. This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies (but not USFWS).
*If information was requested by USFWS, applicants must email, or mail, project information to IR1_ESPenn@fws.gov to initiate a review. USFWS will not accept uploaded project materials.

Check-list of Minimum Materials to be submitted:
____Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.
____A map with the project boundary and/or a basic site plan(particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)
In addition to the materials listed above, USFWS REQUIRES the following
____**SIGNED** copy of a Final Project Environmental Review Receipt

The inclusion of the following information may expedite the review process.
____Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)
____Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at https://conservationexplorer.dcnr.pa.gov/content/resources.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
Email: IR1_ESPenn@fws.gov
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Management
Division of Environmental Review
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name:_____
Company/Business Name:_____
Address:_____
City, State, Zip:_____
Phone:(_____)_____Fax:(_____)_____
Email:_____

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

_____ _____
applicant/project proponent signature date

APPENDIX I

Remedial Feasibility Study, Mulry and Cresswell Environmental, Inc., 2000

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

11 August 2000

Mr. Bruce McClain
Hydrogeologist
Underground Storage Tank Program
PADEP - Southeast Regional Office
Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19248

Re.: Re.: Remedial Feasibility Study
Sunoco Service Station
2899 Holme Avenue, Philadelphia, PA
Duns No. 0005-1078
Fac. ID No. 51-30277

Dear Mr. McClain,

At the request of Mr. Bradford L. Fish of Sunoco Inc. (R & M) (SUN), enclosed please find one copy of the Remedial Feasibility Study generated for the above referenced facility. The report contains a narrative of the methodology and results of a groundwater pumping test and soil vapor extraction test performed on 16 May 2000. Based on the results of these tests and recent groundwater quality data, Mulry and Cresswell Environmental Inc. (MCE), on behalf of SUN will prepare a Remedial Action Plan (RAP) in August 2000.

Please do not hesitate to call me if you have any questions or comments pertaining to the report.

Best regards,

John M. Zatyczyc, P.G.
Geologist

enclosure
cc: Mr. Bradford L. Fish, Sunoco, Inc. (R & M)
Sun Central Filing
MCE file

1691 Horseshoe Pike • Manor Professional Building • Suite 1 • Glenmoore, PA 19343 • Tel: (610) 942-9010 • Fax: (610) 942-9039
2 Kenley Court • Bear, DE 19701 • Tel: (302) 834-5310 • Fax: (302) 834-1616

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

REMEDIAL FEASIBILITY STUDY

GROUNDWATER PUMPING AND SOIL VAPOR EXTRACTION TEST

SUNOCO SERVICE STATION (0005-1078)
FACILITY ID # 51-30277
2899 HOLME AVENUE
PHILADELPHIA, PA

11 AUGUST 2000

PREPARED FOR:

MR. BRADFORD L. FISH, P.G.
HYDROGEOLOGIST
SUNOCO, INC. (R & M)
TWIN OAKS TERMINAL
4041 MARKET STREET
ASTON PA 19014-3197

PREPARED BY:

JOHN M. ZATYCZYC, P.G. # PG-002388-G
GEOLOGIST

(_____)

REVIEWED BY:

MARCO DROESE P.G. # 3738-E
SENIOR HYDROGEOLOGIST

(_____)

1691 Horseshoe Pike • Manor Professional Building • Suite 1 • Glenmoore, PA 19343 • Tel: (610) 942-9010 • Fax: (610) 942-9039
2 Kenley Court • Bear, DE 19701 • Tel: (302) 834-5310 • Fax: (302) 834-1616

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FIGURES

APPENDICES

I INTRODUCTION:

At the request of Mr. Bradford L. Fish, of Sunoco, Inc. (R & M), (SUN), Mulry and Cresswell Environmental, Inc. (MCE) conducted a groundwater pumping and soil vapor extraction test at the Sunoco Service Station located at 2899 Holme Avenue Street, City of Philadelphia, Pennsylvania on 16 May 2000. This testing was performed to obtain hydrogeologic data and to determine the feasibility of groundwater pumping and soil vapor extraction as potential remedial techniques.

As depicted in Figures I and II, Site Location and Surrounding Properties, the site is located at the northwestern corner of Holme Circle between Holme Avenue and Welsh Road in the City of Philadelphia, Pennsylvania, in a mixed residential and commercial area. The subject location is a dealer owned Sunoco service station which performs automobile repairs. According to information obtained by SUN, three 8,000 gallon single walled fiberglass underground storage tanks (USTs), installed in 1982, are currently in use at this site.

On 16 May 2000, the groundwater pumping and soil vapor extraction tests were performed on OW 1, located on the western portion of the facility property. OW 1 has historically contained elevated concentrations of dissolved phase hydrocarbons. Methodology and results of the groundwater pumping and soil vapor extraction tests are discussed in Section III of this report.

A summary and discussion of the results and implications of the above cited tests is presented in Section IV of this report, presenting an evaluation of the feasibility of remedial options at this location.

II HISTORY:

At the request of Mr. Bradford L. Fish of SUN, Groundwater and Environmental Services, Inc. (GES) conducted an Environmental Assessment at the subject location during the month of May 1997 for divestment purposes.

The Environmental Assessment consisted of installing four groundwater observation wells (OWs 1 – 4), sampling and analyzing soil and groundwater from these wells, gauging liquid levels and calculating relative groundwater elevations in the wells. A PADEP well records search was conducted to identify the location of any existing well within 2,500 feet around the site. In addition, a regulatory agency file review and Vista multidatabase search were conducted. Four RCRA sites were identified within 1/8 miles radius of the site, the closest being Lee's Cleaners, located approximately 200 feet west of the site at 2855 Holme Avenue. In addition to the subject facility, one UST site was identified within ¼ mile radius, the Holme Circle Texaco, located approximately 200 feet east of the Sunoco station at 2901 Holme Avenue.

Soil samples were collected from the drill cuttings of all four observation wells on 12 May 1997 and analyzed for BTEX and MTBE (EPA method 8020) and semi-volatiles (EPA method 8270). None of the analytes was reported above method detection/quantification limit for the samples retrieved from 28 – 30 feet below grade surface (bgs) from OW 1, from 28 – 30 feet bgs from OW 3 and from 28 – 30 feet bgs from OW 4. For the sample retrieved from 18 – 20 feet bgs from OW 2, none of the analytes was reported above method detection/quantification limit, with the exception of MTBE, reported at 160 µg/kg. This value is below the PADEP Statewide health standard for soil.

In addition to the analytes described above, groundwater samples were analyzed for semi volatiles by method SW 846 8270C and for total dissolved solids (TDS) by method 160.1 during the initial sampling event on 13 May 1997. None of the semi volatiles was reported above method detection/quantification limit for any of the four wells, with the exception of phenanthrene, reported at 12 µg/l for the groundwater sample from OW 2. The reported TDS concentrations were: 414 mg/l for OW 1; 309 mg/l for OW 2; 216 mg/l for OW 3; and 450 mg/l for OW 4.

At the request of Mr. Fish of SUN, GES initiated a quarterly groundwater monitoring program in October 1997. Mulry and Cresswell Environmental Inc., (MCE) assumed site responsibilities and continued the quarterly groundwater monitoring program at this location in February 2000.

III GROUNDWATER PUMPING AND SOIL VAPOR EXTRACTION TEST – 16 MAY 2000:

A. METHODOLOGY

On 16 May 2000, a groundwater pumping test and soil vapor extraction test was conducted on OW 1. Subsequent to measuring static water table elevations (Table IA) in all observation wells, a submersible pump was deployed into OW 1. The depth to liquid water was measured from the top of the casing, adjacent to a notch in the north side of the casing in each well using an ART model IS-100-E electronic interface sensing probe. The interface sensing probe can distinguish hydrocarbon from water, is calibrated in 0.01' increments, and is intrinsically safe. Prior to measuring depth to liquid and in between measurements in different wells, the sensor probe and several feet of the measuring tape were washed in a solution of tap water and detergent and rinsed with tap water.

It should be noted that the static depth to water in OW 1 prior to the deployment of the pump was approximately 36.86 feet below top of casing (BTOC). With the pump deployed and the vent extension pipe attached to the well head, static depth to water was measured at approximately 38.42 feet from a fixed point on the vent pipe extension. Depth to water and drawdown data have been

corrected in the tables following in this report to compensate for the addition of the vent extension pipe.

The pumping rate was set to allow for sufficient drawdown in the pumping well without drawing the water level below the level of the top of the pump which was set at approximately 42.00 feet BTOC and to increase the de-watered screened interval to maximize the effect of the soil vapor extraction. The total depth of OW 1 was gauged at 43.7 feet BTOC. The pump was set at approximately one foot above the bottom of the well and a pumping rate of approximately 0.33 to 0.43 gallons per minute (gpm) was established to create a maximum drawdown of approximately 2.21 feet below that of the static liquid level in the pumping well (Table IIA).

Initially, for the first 30 minutes of the test, the pumping rate was set at approximately 0.42 to 0.43 gpm. At 35 minutes, the flow rate was decreased to approximately 0.33 gpm. For the duration of the test, the flowrate remained relatively stable ranging between 0.33 to 0.39 gpm.

Liquid level gauging during the pump test indicated that at a flowrate of between 0.42 and 0.43 gpm during the first 30 minutes of the test, the depth to water in the pumping well decreased to approximately 38.64 feet BTOC, approximately 1.78 feet below static conditions. Due to the rapid decrease in the watertable elevation (approximately 0.05 per minute) and the limited water column (approximately 6.84 feet), after approximately 30 minutes of pumping, the flowrate was decreased to approximately 0.33 gpm. At this flowrate, which remained relatively stable for the remainder of the test, the liquid level in OW 1 decreased by approximately between 0.03 to 0.05 feet through 180 minutes of pumping.

At 210 minutes of pumping, with liquid level measurements taken at 30 minute intervals, the water level increased by approximately 0.36 feet from the previous reading at 180 minutes with the flowrate remaining stable. Subsequent readings again showed a decrease of approximately 0.24 feet between the 240 and 270 minute readings. After 300 minutes, (5 hours) of pumping, the liquid level decreased an additional 0.05 feet. This is approximately 2.17 feet below static conditions. At approximately 300 minutes, soil vapor extraction was activated on OW 1. Presumably due to the applied vacuum of approximately 39 inches of water gauge ("H_2O), the liquid level measured at 360 minutes (6 hours) had increased by approximately 0.14 feet from the previous reading. Subsequent readings at 420 minutes (7 hours), 450 minutes (7.5 hours) and 480 minutes (8 hours) showed a slightly decreasing water level in OW 1, ranging between 0.05 and 0.07 feet between each reading. The total pumping time accumulated to approximately 480 minutes (8 hours) with OW 1 under simultaneous soil vapor extraction and groundwater pumping conditions for approximately 120 minutes (2 hours). With no observed response to vacuum in OWs 2 and 3, located

approximately 110 feet from OW 1, and only limited vacuum response of between 0.04" and 0.06 " H_2O measured on OW 4, the vapor extraction test was terminated. A detailed description of the vapor extraction testing results is presented in Section E of this report.

Recovered groundwater was treated with two 55 gallon, 200 lb. liquid phase granular activated carbon (GAC) units prior to discharge to a sanitary sewer system via a cleanout, located along Holme Avenue approximately 60 feet from the pumping well OW 1, under temporary approval from the City of Philadelphia, Water Department. A copy of the approval letter is attached as Appendix A.

Liquid level gauging (Table II B) was conducted on the remaining on-site wells OWs 2, 3 and 4 during the pumping test and simultaneous soil vapor extraction and groundwater pumping test.

B. HYDROGEOLOGY

Static depth to water was measured in all wells (OWs 1, 2, 3 and 4) prior to initiating the pumping test on OW 1. As presented in Table IA, Water Table Elevations, on 16 May 2000 depth to water ranged from a maximum of 37.20 feet below the top of the well casing (BTOC) in OW 4 to a minimum of 35.50 feet BTOC in OW 3.

As depicted on the attached Figure IIIA, Water Table Elevation (WTE Static Conditions) for 16 May 2000, under static conditions, the general direction of groundwater flow was to the southwest at the eastern half of the site under a gradient of approximately 2 feet per 30 feet (0.067 or 6.7%); and to the northwest at the western half of the site under a gradient of approximately 1 foot per 35 feet (0.029 or 2.9%).

As illustrated in Figure IIIB, Water Table Elevation (WTE Pumping Conditions) for 16 May 2000, after approximately eight hours of pumping from OW 1 a cone of depression was created around OW 1, while the magnitude and direction of the groundwater gradient between OWs 2, 3 and 4 did not change from static conditions.

During the 8 hours of pumping, no measurable drawdown was recorded in the surrounding observation wells (OWs 2, 3 and 4). Rather, watertable elevation increased during the course of the day by maximums of 0.02 and 0.04 feet in OWs 2 and 3, respectively and by only 0.01 feet in OW 4 presumably representing natural fluctuation in water table elevations. The data selected to construct Figure IIIB were taken after 8 hours of pumping with a measured drawdown in the pumping well of approximately 2.21 feet BTOC.

C. PUMPING TEST

As presented on Table IIA, the pumping test on OW 1 was conducted for a total approximately 480 minutes (8 hours). During the 8 hours of the pumping test, water table elevations (WTE) in the pumping well OW 1 decreased to a maximum drawdown of approximately 2.21 feet after 480 minutes of pumping. This is illustrated by the drawdown (s) versus time (t) plot attached for OW 1 as Figure IV. Approximately 173 gallons of groundwater were removed during the test, at an average flow rate of approximately 0.36 gpm.

As presented in Table IIB, during the 480 minutes (8 hour) duration of the pump test, no drawdown was measured in the observation wells OWs 2, 3 and 4. OWs 2 and 3 are located approximately 110 feet from OW 1 and OW 4, is located approximately 65 feet from OW 1. Liquid level gauging of these wells commenced at approximately 20 minutes into the pump test. At 20 minutes elapsed time, an increase of 0.01 feet above the static level was measured in OWs 2 and 3 during the first 80 minutes of pumping with no change in WTE in OW 4.

Between 100 minutes and 480 minutes of pumping, the WTE increased to a maximum of 0.02 feet in OW 2, measured after 140 minutes of pumping and a maximum of 0.04 feet in OW 3, which was measured during the seventh hour (420 minutes) and eighth hour (480 minutes) of the test. With respect to OW 4, between the 100 and 480 minute time intervals, a increase of 0.01 feet above the static level was measured in OW 4. These small increases presumably represent background water table changes. The increase in WTE for these wells are denoted as positive values on Table IIB.

During the pump test an influent sample of the groundwater was collected and analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tert-butyl ether (MTBE), Naphthalene, and Isopropylbenzene (Cumene) by method 8260A. As presented in Table III, the influent stream sample was reported as containing 6,706 µg/l BTEX, 100 µg/l MTBE, 140 µg/l Naphthalene, and 19 µg/l Cumene.

As required by the Philadelphia Water Department (PWD), an effluent stream sample was collected and analyzed for BTEX by EPA method 8021B and for oil and grease (O & G) by EPA method 1664. Both BTEX and O & G concentrations were reported at non-detectable (ND). Results of the influent and effluent sampling are presented in Table III. Laboratory analytical reports for the influent and effluent groundwater sampling are attached as Appendix B. The results of the effluent stream sample were reported to PWD on 8 June 2000.

D. AQUIFER PARAMETERS

The pump test data from the pumping well (OW 1) was evaluated using the Cooper & Jacob time-drawdown Method, Neuman's Method and the Theis Method corrected for an unconfined aquifer. The calculations for Transmissivity (T), and hydraulic conductivity (K) were calculated for OW 1, the pumping well based on time-drawdown and discharge-time data. The data and associated graphs are depicted in the attached Appendix C. Data from OWs 2, 3 and 4 were not evaluated as no drawdown was measured in these wells during the 480 minutes (8 hours) of pumping. Without drawdown data from those wells, a capture zone was not calculated.

The calculated transmissivity (T) and conductivity (Ks), for each method were:

Method	T (ft^2/min)	Ks (ft/min)
Cooper & Jacob (OW 1) (time-drawdown)	0.0145	0.000291
Neuman's method (OW 1)	0.0137	0.000274
Theis (OW 1), variable discharge rate	0.0153	0.000307
Theis & Jacob (OW 1) Recovery method	0.0104	0.000209
Average:	**0.0135**	**0.000270**

(aquifer thickness "b" assumed to be = 50 feet, where required)

In general, the T and Ks values were in relatively close agreement for the pumping well for all evaluation all methods employed. The average values for the aquifer parameters were calculated as:

Transmissivity T = 0.0135 ft^2/min;
Hydraulic Conductivity Ks = 0.000270 ft/min (0.39 ft/day)

Based upon the average "K" value of 0.000270 ft/min, average gradient "i" of 0.067 ft/ft and approximated porosity "n" of 40 % for clay, the flow velocity can be calculated as:

$V = Ki / n$

V = 0.0000452 ft/min, or approximately 24 feet per year.

E. GROUNDWATER PUMPING AND SOIL VAPOR EXTRACTION TEST

After approximately 300 minutes (5 hours) of pumping, the soil vapor extraction (SVE) line was connected to OW 1 and sealed with the submersible pump still deployed and pumping at a flow rate of between approximately 0.34 and 0.39 gallons per minute in OW 1. The regenerative blower, Rotron model DR 454, was started for the vacuum extraction. Extracted soil gas was treated via two (2) 55 gallon, 200 lb. vapor phase granular activated carbon (GAC) drums

prior to atmospheric discharge. Approval to conduct the SVE test was granted by the City of Philadelphia, Department of Health on 2 May 2000. A copy of the approval letter is attached as Appendix A. Soil gas influent concentrations were measured via a pet cock opening in the vapor line influent to the GAC units using a Gastechtor Portable Gas Alarm, Model No. 1314 SMPN photoionization detector (PID Gastech). A Tedlar™ air sampling bag was also filled via the sampling port with influent soil gas and submitted to the laboratory for analyses for C_2-C_{10} hydrocarbons as propane, BTEX and MTBE concentrations by method EPA 18 and 25 modified (laboratory analysis reports are attached as Appendix D). The filled tedlar bag was immediately placed on ice in a cooler and subsequently transported to MCE's office and transferred to a refrigerator, stored at 4^0 C, prior to submittal via lab courier under chain of custody to Lancaster Laboratories, Inc. for analysis.

At the start of the vapor extraction test, the main flow control valve was fully open. After approximately 5 minutes, with the valve approximately ¾ shut, a vacuum reading was obtained on the influent line with a Dwyer® Magnahelic vacuum (0" to 100" H_2O) gauge to determine vacuum in and flow rate from the SVE well OW 1, as well as for the calculation of hydrocarbon removal rates. Initially, the vacuum was recorded as 39" H_2O. After 15 minutes, vacuum was recorded again at 39" H_2O. Subsequent readings were taken at 30, 45, 60, 90 and 120 minutes. During each of the vacuum measurements, corresponding influent and effluent PID readings were measured with a Gastechtor Portable Gas Alarm, Model No. 1314 SMPN photoionization detector (PID Gastech) in order to determine the optimal vacuum extraction which would produce the maximum influent soil vapor extraction concentrations. With the initial vacuum set at 39" H_2O, the influent concentration was recorded at 160 ppm. During the 30 minute readings, the vacuum control valve was closed slightly in order to determine if an increase in vacuum would result in an increase in the soil vapor gas concentration. With a slight increase in vacuum to 43" H_2O, the influent soil gas concentration was reduced to 130 ppm. Subsequently, the vacuum was adjusted back to 39" H_2O and the influent soil gas concentration increased back to 160 ppm. For the remainder of the vacuum extraction, the vacuum remained stable at 39" H_2O and influent concentrations ranged between 150 and 160 ppm.

Effluent PID readings were also measured at regular time intervals. The effluent concentrations were initially measured at 0.0 ppm after 5 minutes. After 15 minutes, the effluent concentration increased to 90 ppm and fluctuated between 80 and 90 ppm for the duration of the test which was terminated after approximately 2 hours as the influent concentrations also remained relatively stable.

The flow rate was determined by measuring the time for a 30 gallon bag to be filled with air at the effluent stack. Based upon the field measurements, the bag was repeatedly filled in approximately four (4) seconds. Thirty (30) gallons is approximately equivalent to four (4) cubic feet (ft^3). Therefore the flowrate would be 1 ft^3 per second or sixty (60) ft^3 /minute (60 SCFM). These data are summarized in Table IV. The estimated hydrocarbon removal rate during the SVE test was approximately 0.12 lb/hr.

At approximately 90 minutes into the vacuum extraction test, a tedlar air bag sample was collected from the influent air stream and analyzed for BTEX, MTBE and $C_2 - C_{10}$ hydrocarbons.

The Tedlar air bag sample retrieved from the soil gas stream extracted from OW 1 on 16 May 2000 was reported as containing: 34 mg/m^3 BTEX, reported as <3 mg/m^3 benzene, <4 mg/m^3 toluene, <5 mg/m^3 ethylbenzene and 34 mg/m^3 total xylenes, 45 mg/m^3 MTBE and 400 mg/m^3 C_2-C_{10} hydrocarbons (as propane). A copy of the laboratory analytical report is attached as Appendix D. Based upon the corresponding soil gas flow rate of 60 scfm, a hydrocarbon removal rate of approximately 0.09 lb./hr C_2-C_{10}, approximately 0.0076 lb/hr BTEX, and approximately 0.01 lb/hr MTBE was achieved via soil vapor extraction with simultaneous groundwater pumping from OW 1. These estimated hydrocarbon removal rates are presented in Table V.

In addition to recording vacuum readings at the vacuum extraction well, OW 1, vacuum readings were also measured at the observation wells OWs 2, 3 and 4 at regular time intervals to determine the radius of influence, between wells across the site.

During the 2 hours of the vacuum extraction test, no vacuum response was recorded in OWs 2 and 3, which are located approximately 110 feet from OW 1. After approximately 30 minutes, a vacuum response of 0.04" H_2O was measured in OW 4, which is located approximately 65 feet from OW 1. The vacuum response remained stable at 0.04" H_2O or the first 60 minutes of the test, decreased to 0.02" H_2O at 90 minutes and subsequently increased to 0.06" H_2O at 120 minutes. These results are summarized in Table VI.

IV SUMMARY AND DISCUSSION:

Mulry and Cresswell Environmental, Inc. (MCE) conducted a groundwater pumping and soil vapor extraction test at the Sunoco Service Station located at 2899 Holme Avenue, Philadelphia, Pennsylvania in May 2000.

During the pumping test, approximately 173 gallons of groundwater were removed from OW 1 during the 480 minutes (8 hours) of the pump test, at an average flowrate of approximately 0.36 gpm.

A maximum drawdown of 2.21 feet was achieved in OW 1, the pumping well, during the eight hours of pumping. No drawdown responses were measured in the observation wells (OWs 2, 3 and 4) during the 8 hours of pumping. Average aquifer parameters were calculated as $T=0.0135\ ft^2/min$; $K_s=2.7x10^{-4}$ ft/min.

For approximately 120 minutes of the pumping test, soil vapor extraction was conducted on OW 1 simultaneously with continued pumping at a rate of approximately 0.33 to 0.36 gpm. The soil vapor flow rate was calculated as approximately 60 scfm. PID readings on the extracted soil gas influent indicated hydrocarbon concentrations of approximately 150 to 160 ppm. A Tedlar bag soil gas sample retrieved from the extracted soil gas influent stream and submitted to the laboratory for analysis and was reported as containing: 34 mg/m^3 BTEX, reported as <3 mg/m^3 benzene, <4 mg/m^3 toluene, <5 mg/m^3 ethylbenzene and 34 mg/m^3 total xylenes, 45 mg/m^3 MTBE and 400 mg/m^3 C_2-C_{10} hydrocarbons (as propane).

Vacuum communication was measured at between 0.02 and 0.06 inches H_2O in OW 4, located approximately 65 feet to the northeast of the vapor extraction well, OW 1. No response to vacuum was measured in OWs 2 and 3, located approximately 110 feet east and northeast, respectively, of OW 1.

While the influence of pumping and soil vapor extraction on the subsurface appears to be spatially limited, groundwater quality data obtained during future quarterly sampling events will be evaluated to determine the need for and feasibility of either a stationary remediation system or periodic "hot spot" remediation efforts.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table IA: Water Table Elevations (Static Conditions)
Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA

OW 1

Date	Depth to Water	Casing Elevation	Water Table Elevation
16-May-00	36.86	98.81	61.95

OW 2

Date	Depth to Water	Casing Elevation	Water Table Elevation
16-May-00	36.40	99.20	62.80

OW 3

Date	Depth to Water	Casing Elevation	Water Table Elevation
16-May-00	35.50	100.00	64.50

OW 4

Date	Depth to Water	Casing Elevation	Water Table Elevation
16-May-00	37.20	98.47	61.27

Table IB: Water Table Elevations (Pumping Conditions)
After 8 Hours of Pumping from OW 1
Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA

OW 1

Date	Depth to Water	Casing Elevation	Water Table Elevation
16-May-00	39.07	98.81	59.74

OW 2

Date	Depth to Water	Casing Elevation	Water Table Elevation
16-May-00	36.38	99.20	62.82

OW 3

Date	Depth to Water	Casing Elevation	Water Table Elevation
16-May-00	35.46	100.00	64.54

OW 4

Date	Depth to Water	Casing Elevation	Water Table Elevation
16-May-00	37.20	98.47	61.27

Depth to water as measured for OW 1, the pumping well, is adjusted to account for vent pipe extension.

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.

Table IIA: Pumping Test on OW 1 - Pumping Rates and Drawdown
Sunoco Service Station (0005-1078), 2899 Holme Avenue, Philadelphia, PA
(pumping time in minutes, flow rate in gpm, dtw in feet)

Clock Time	Pumping Time	gpm	DTW	*Drawdown	Comments
10:00	0	0	36.86	-	Static water level with pump deployed in well
	0.5		37.34	0.48	
	1		37.40	0.54	
	1.5		37.46	0.60	
	2		37.49	0.63	
	3		37.61	0.75	
	4		37.70	0.84	
	5		37.78	0.92	
	6	0.43	37.86	1.00	
	7		37.93	1.07	
	8		37.99	1.13	
	9		38.04	1.18	
	10	0.42	38.09	1.23	
	12		38.19	1.33	
	14		38.28	1.42	
	16		38.33	1.47	
	18	0.42	38.38	1.52	
	20		38.43	1.57	
	25		38.55	1.69	
	30	0.42	38.64	1.78	
	35		38.60	1.74	Decrease flowrate to 0.33 gpm
	40		38.59	1.73	
	45		38.57	1.71	
	50	0.34	38.58	1.72	
	55		38.59	1.73	
	60	0.34	38.60	1.74	
	70		38.61	1.75	
	80	0.33	38.64	1.78	
	90		38.66	1.80	
	100		38.69	1.83	
	120	0.33	38.71	1.85	
	140		38.76	1.90	
	160		38.79	1.93	
	180	0.34	38.82	1.96	
	210		38.46	1.60	
	240	0.38	38.74	1.88	
	270		38.98	2.12	
	300	0.36	39.03	2.17	Connected Well to SVE at 5 hrs.
	360		38.89	2.03	
	420	0.39	38.94	2.08	Shutdown vacuum extraction test after 2 hrs.
	450		39.01	2.15	
18:00	480	0.34	39.07	2.21	terminate test after 8 hours

DTW = Depth to Water
* Depth to water as presented above is calculated based upon measurements taken from the top of the well casing.

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ENVIRONMENTAL, INC.

Table IIB: Drawdown Response in OWs 2, 3 and 4 to pumping from OW 1
Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA

Elapsed Time (min.)	OW 2-DTW	Drawdown OW 2	OW 3-DTW	Drawdown OW 3	OW 4-DTW	Drawdown OW 4
Static DTW (ft.)	36.40	-	35.50	-	37.20	-
20	36.39	0.01	35.49	0.01	37.20	0.00
25	-	-	-	-	-	-
30	-	-	-	-	-	-
35	-	-	-	-	-	-
40	36.39	0.01	35.49	0.01	37.20	0.00
45	-	-	-	-	-	-
50	-	-	-	-	-	-
55	-	-	-	-	-	-
60	36.39	0.01	35.49	0.01	37.20	0.00
70	-	-	-	-	-	-
80	36.39	0.01	35.49	0.01	37.20	0.00
90	-	-	-	-	-	-
100	36.39	0.01	35.48	0.02	37.20	0.00
120	36.39	0.01	35.48	0.02	37.20	0.00
140	36.38	0.02	35.48	0.02	37.19	0.01
160	36.40	0.00	35.48	0.02	37.19	0.01
180	36.39	0.01	35.48	0.02	37.19	0.01
210	36.39	0.01	35.48	0.02	37.19	0.01
240	36.39	0.01	35.48	0.02	37.19	0.01
270	36.38	0.02	35.48	0.02	37.19	0.01
300	36.38	0.02	35.47	0.03	37.19	0.01
360	36.38	0.02	35.48	0.02	37.20	0.00
420	36.38	0.02	35.46	0.04	37.19	0.01
480	36.38	0.02	35.46	0.04	37.20	0.00

Increases from the static water table elevations for OWs 2, 3 and 4 are denoted by the positive values.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table III: Pump Test Effluent and Influent Results - Pumping Well OW 1
BTEX, MTBE, Naphthalene, Isopropylbenzene (Cumene) in ug/l, Oil & Grease (O&G) in mg/l
Sunoco Service Station (Duns # 0005-1078)
2899 Holme Avenue, Philadelphia, PA

Effluent OW 2

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Isopropylbenzene	Oil & Grease
16-May-00	BDL	BDL	BDL	BDL	BDL	-	-	-	BDL

Influent OW 2

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Isopropylbenzene	Oil & Grease
16-May-00	120	19	67	6500	6706	100	140	19	-

"-" = compound not analyzed
BDL = Below Method Detection Limit

Effluent samples were analyzed for BTEX by method 8021B and for oil and grease (O&G) by EPA method 1664

Influent samples were analyzed for BTEX, MTBE, Naphthalene and Isopropylbenzene by method 8260A.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table IV: Combined Vapor Extraction/Groundwater Pumping Test

Sunoco Service Station (0005-1078), 2899 Holme Avenue, Philadelphia, PA

Vapor Extraction Test on OW 1

16 May 2000

Rotron regenerative blower, Model DR 454

Pumping rate of the simultaneous groundwater pumping test fluctuated between approximately 0.43 - 0.33 gpm (for the entire test)

Influent air sample was collected at 16:50 for laboratory analysis

Estimated Hydrocarbon Removal Based on Gastech-measurements of Extracted Soil Vapor:

Elapsed Time (min)	Vacuum (Inches H_20)	SCFM	Influent ppm	estimated lb./hr
5	39	60	160	-
15	39	60	160	0.13
30	39	60	160	0.13
30	43	-	130	0.11
45	39	60	150	0.12
60	39	60	160	0.13
90	39	60	150	0.12
120	39	60	150	0.12

Conversion of Gastech field readings (ppm) to lb. hydrocarbons:

87g (avg. mol weight hydrocarbons)	"x" ppm reading	scfm	0.077 lb. (weight of air)	60 min
29g (avg. mol weight air)	1,000,000 air	min	cubic ft. (per volume of air)	1 hour

SCFM data calculated by measuring the time to fill a bag of known volume (30 gallons) with air.

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Table V: Estimated Hydrocarbon Removal Based on Laboratory Analytical Results for Extracted Soil Vapor:
Sunoco Service Station (0005-1078), 2899 Holme Avenue, Philadelphia, PA

For OW 1 influent sample, C_2- C_{10} Hydrocarbons, 16 May 2000, 16:50:

400 mg C_2-C_{10} Hydrocarbons	1 lb.	60 scf	60 min	0.028317 m^3	0.0899 lb. C_2-C_{10}
m^3	453,590 mg	min	hour	scf	hour

For OW 1 influent sample, total BTEX, 16 May 2000, 16:50:

34 total BTEX	1 lb.	60 scf	60 min	0.028317 m^3	0.0076 lb. total BTEX
m^3	453,590 mg	min	hour	scf	hour

For OW 1 influent sample, MTBE, 16 May 2000, 16:50:

45 mg MTBE	1 lb.	60 scf	60 min	0.028317 m^3	0.0101 lb. MTBE
m^3	453,590 mg	min	hour	scf	hour

Conversion of laboratory analytical results in mg/m^3 to lb./hour:

"x" mg C_2-C_{10} Hydrocarbons	1g x 1 lb.	scf	60 min	0.028317 m^3	= lb. C_2-C_{10} hydrocarbons
1 m^3 air	1000 mg x 453.59 g	min	hour	scf	hour

conversion for bag-airflow measurements to vacuum, scfm, m^3/min:
(x gal / x sec) x (60 sec / min) x (3.785 l / 1 US gal) x (1 m^3 / 1000 l)

Table VI: Vacuum Readings in Surrounding Observation Wells
Combined Vapor Extraction/Groundwater Pumping Test on OW 1
Sunoco Service Station (0005-1078) 2899 Holme Avenue, Philadelphia, PA

Elapsed Time (min)	OW 2	OW 3	OW 4
	"H_2O Vacuum	"H_2O Vacuum	"H_2O Vacuum
0	-	-	-
15	0.00	0.00	-
30	0.00	0.00	0.04
45	0.00	0.00	0.04
60	0.00	0.00	0.04
90	0.00	0.00	0.02
120	0.00	0.00	0.06

* 0" to 1" magnahelic gauge used to record vacuum response in observation wells.

OW 2 is located approximately 110 feet from OW 1.

OW 3 is located approximately 110 feet from OW 1.

OW 4 is located approximately 65 feet from OW 1.

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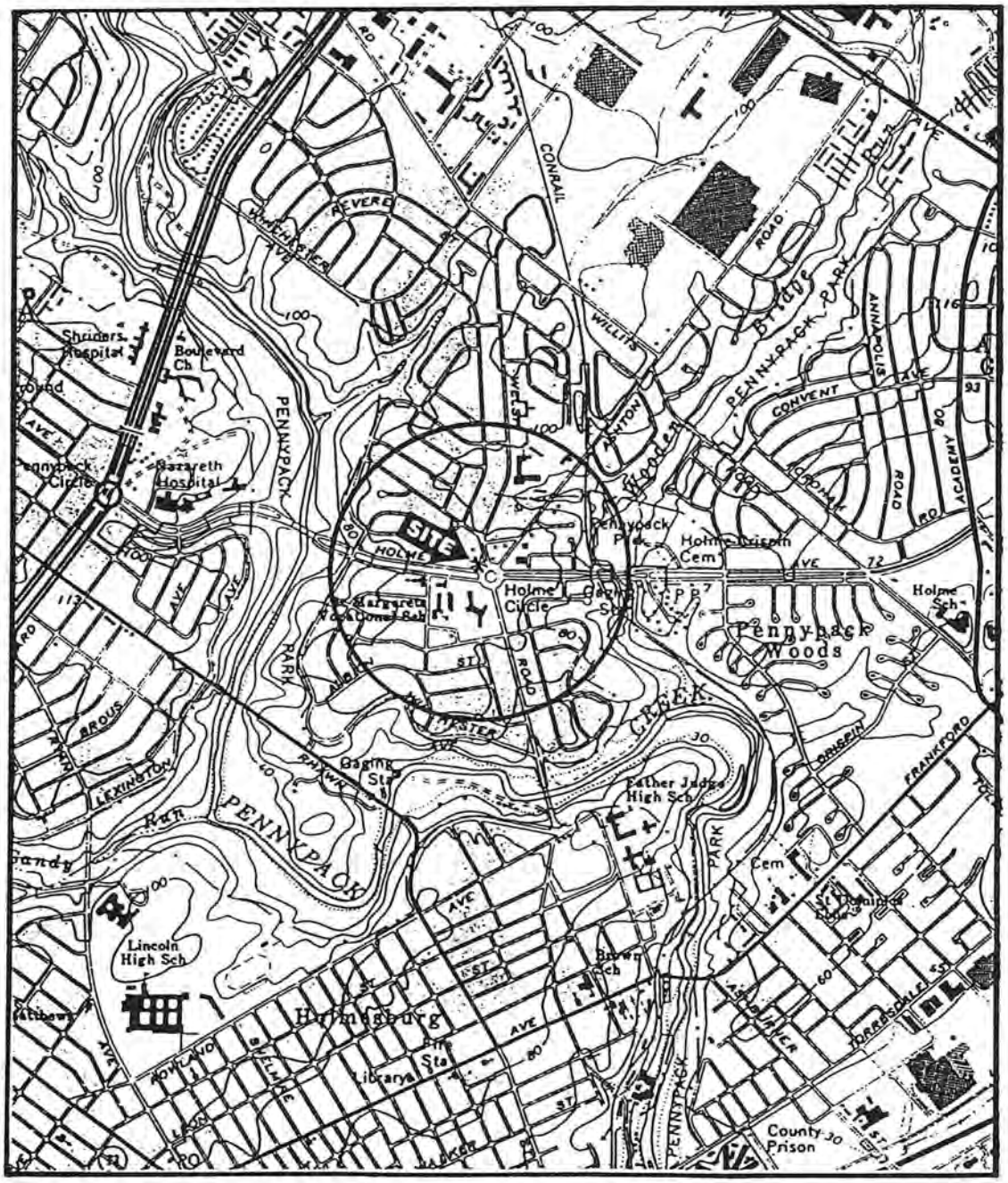

FIGURE I
SITE LOCATION
SUNOCO STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

SCALE IN FEET
0 2000 4000

SOURCE: USGS, FRANKFORD, PA
QUADRANGLE. 1967
PHOTOREVISED 1983

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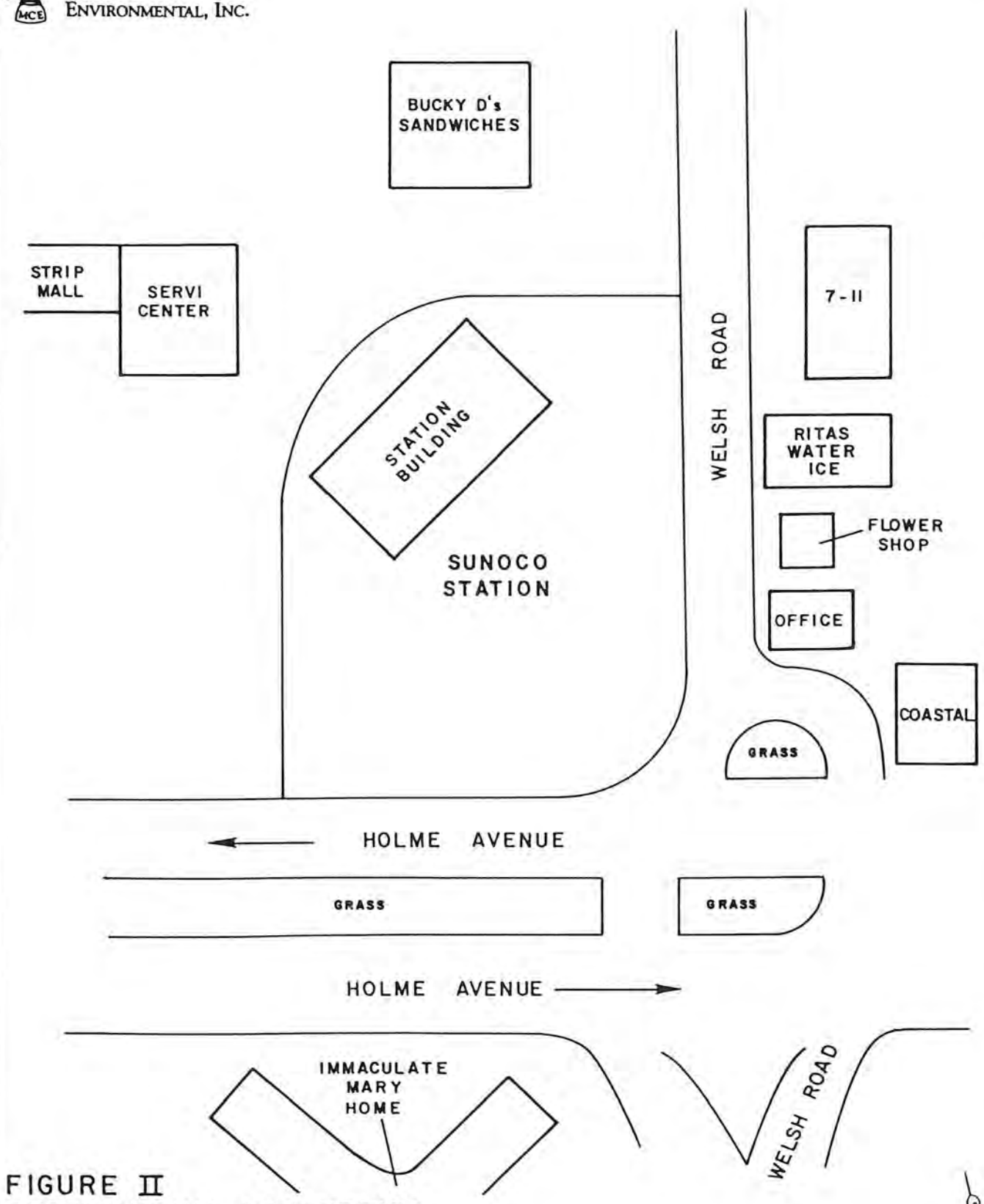

FIGURE II
SURROUNDING PROPERTIES
SUNOCO STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

NOT TO SCALE

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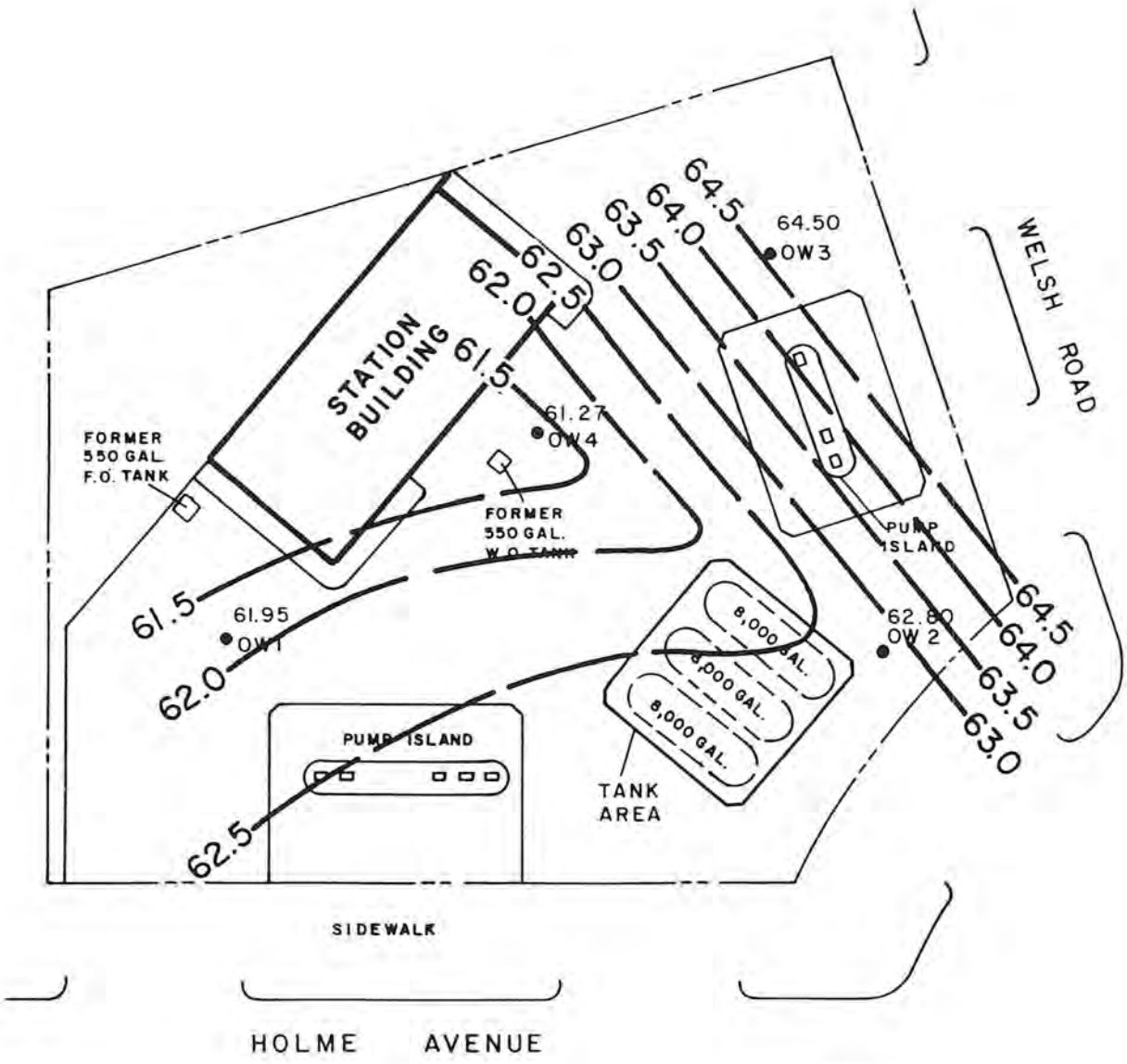


FIGURE III A
WATER TABLE ELEVATION (FEET)
(STATIC CONDITIONS)
16 MAY 2000
SUNOCO STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

● OBSERVATION WELL

NORTH

APPROXIMATE SCALE IN FEET

0 30

SOURCE: GES PLOT PLAN

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

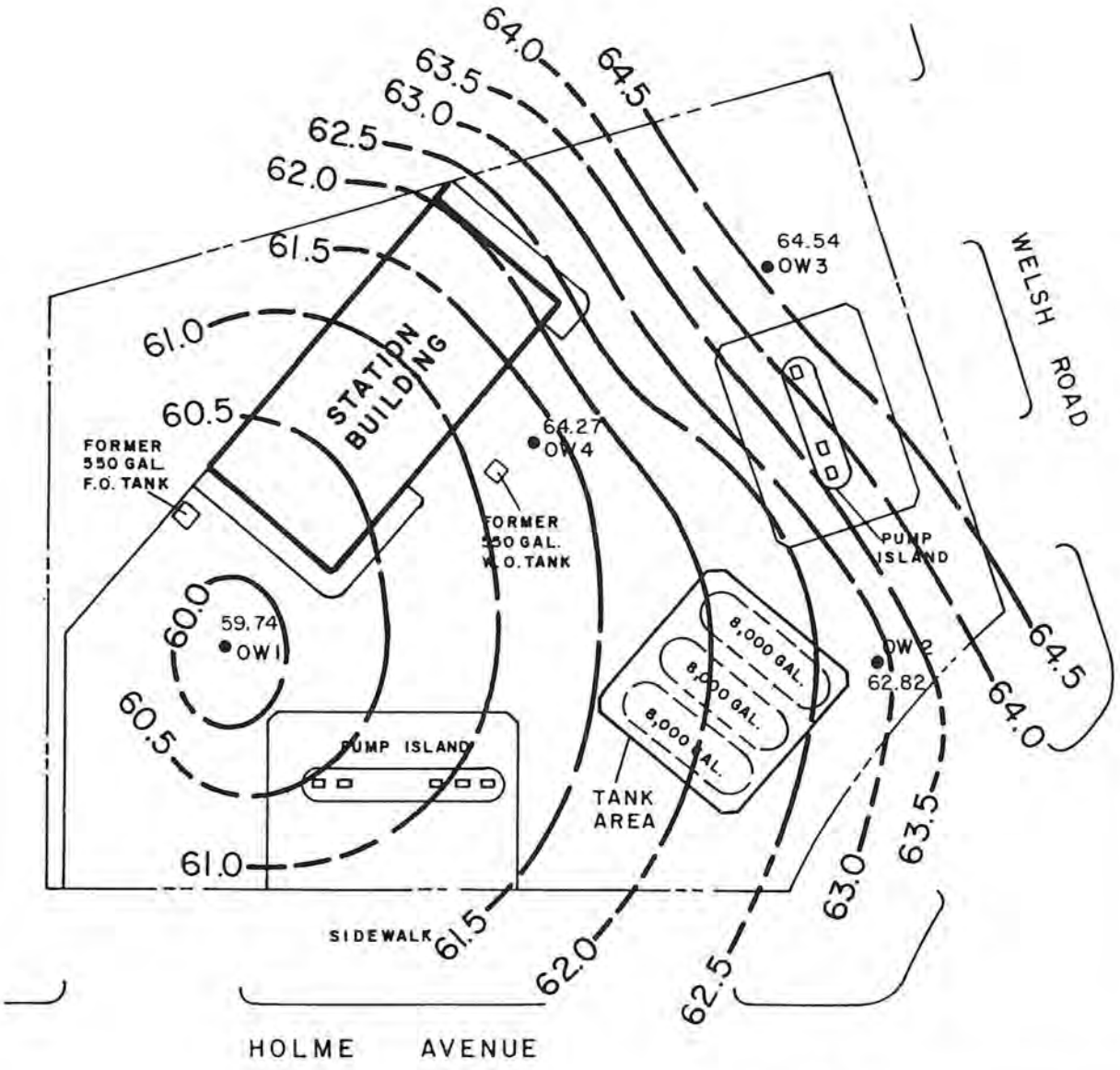


FIGURE IIIB
WATER TABLE ELEVATION (FEET)
PUMPING CONDITIONS AFTER 8 HOURS
16 MAY 2000
SUNOCO STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

● OBSERVATION WELL

NORTH

APPROXIMATE SCALE IN FEET

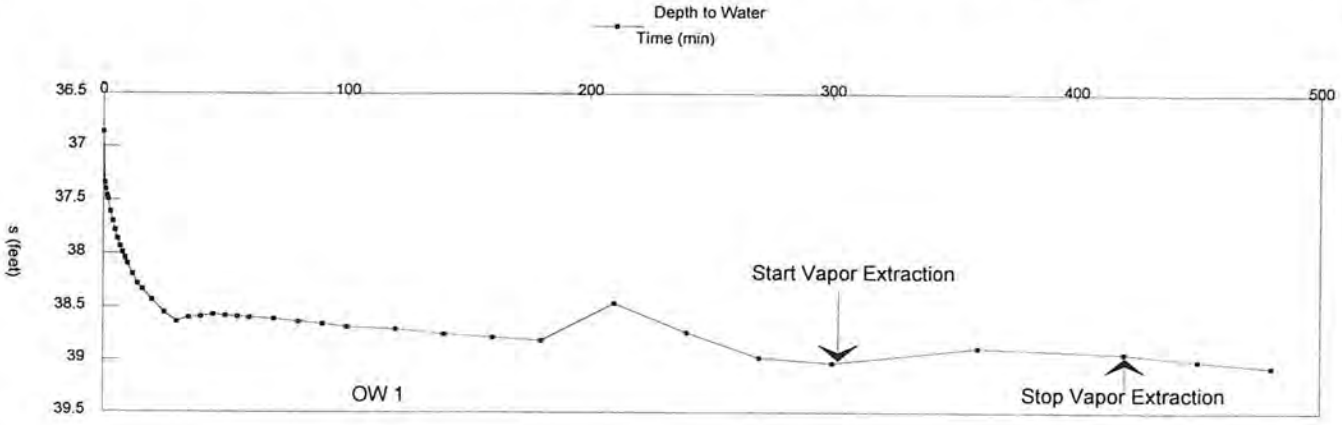
0 30

SOURCE: GES PLOT PLAN

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.

Figure IV: Plots of "s" vs. "t" for the Pumping Well OW 1

Pumptest on OW 1 - 16 May 2000
Sunoco Service Station (0005-1078), 2899 Holme Avenue, Philadelphia, PA



APPENDIX A

COPIES OF LETTERS OF APPROVAL

CITY OF PHILADELPHIA

WATER DEPARTMENT
ARA Tower at Reading Center
1101 Market Street

KUMAR KISHINCHAND, P.E
WATER COMMISSIONER

May 2, 2000

Mr. John Zatyczyc
Mulrey & Cresswell Environmental, Inc
1691 Horseshoe Pike
Manor Professional Bldg. Suite 1
Glenmore, PA 19343

Re: **Sunoco Station**
2899 Holme Ave.

Dear John Zatyczyc:

The Water Department has reviewed your April 26, 2000 letter requesting permission to discharge pretreated groundwater from a pump test at the above location to the City's sanitary sewer system. Approval is hereby granted provided the following conditions are met.

- o BTEX ≤ 40 PPM.
- o SGT-HEM (non-polar O&G by EPA method 1664) < 100 PPM
- o No floating layer or visible sheen is present.
- o Not to exceed 10% of the lower explosive limit at the point of discharge.
- o Extreme caution must be exercised to ensure the discharge is to the sanitary sewer as discharges to the storm sewer are prohibited.
- o Exceedances of permitted limits should be reported pursuant to Section 3.3.7 of the City's Wastewater Control Regulations.
- o Flow readings and analytical data are provided to this office along with a check for the volume of groundwater discharged at the current rate ($4.59/1000 cf as of May, 00).
- o In the event that an ongoing remediation discharge will occur, a permit will be required

This permit expires 45 days from the date of this letter or at the end of the project, whichever occurs first.
Please feel free to contact me at 215-685-4910 or Mr. Lonnie Goldiner at 215-685-6239, if you have any questions relating to this matter.

Sincerely,

Keith D. Houck
Assistant Manager
Industrial Waste Unit

C:\lonnie.goldiner@phila.gov\GROUNDW\sunoco 2899 holme ave.doc

CITY OF PHILADELPHIA

DEPARTMENT OF PUBLIC HEALTH
Walter H. Tsou, MD, MPH
Health Commissioner

John F. Domzalski
Executive Deputy/Chief of Staff

Public Health Services
E. Jane Hix
Assistant Health Commissioner

Air Management Services
Morris Fine
Director

Source Registration
321 University Avenue, 2nd Floor
Philadelphia, PA 19104

Telephone (215) 685-7572
Fax (215) 685-7593

May 2, 2000

Mr. John Zatyczyc, PG., Geologist
Mulry & Cresswell Environmental, Inc.
1691 Horseshoe Pike
Manor Professional Building, Suite 1
Glendora, PA 19343

RE: Eight-hour temporary Vapor Extraction test, at the Sunoco Station (DUNS #0005-1078) 2899 Holme Avenue.

Dear Mr. Zatyczyc:

This letter is in response to your letter dated April 26, 2000. Air Management Services hereby approves your request to conduct a one-time, eight hour temporary Vapor Extraction test at the Sunoco Station (DUNS #0005-1078) 2899 Holme Avenue.

If you have any questions, please call me at (215) 685-7572.

Sincerely yours,

Roger M. Fey
Engineering Supervisor
Source Registration

APPENDIX B

GROUNDWATER PUMPING AND VACUUM EXTRACTION TEST-OW 1, GROUNDWATER INFLUENT AND EFFLUENT SAMPLE LABORATORY ANALYTICAL RESULTS

GLA
LABORATORIES
1008 W. Ninth Avenue • King of Prussia, Pennsylvania 19406 (610) 337-9992 FAX (610) 337-9939

Marco Droese
MULRY & CRESSWELL ENV.
1691 Horseshoe Pike
Glenmore, PA 19343

RE: Holme Ave.

Dear Marco Droese

Enclosed are the results of analyses for sample(s) received by the laboratory on May 17, 2000. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Andrea Speck
Project Manager

GLA LABORATORIES

1008 W. Ninth Avenue • King of Prussia, Pennsylvania 19406 (610) 337-9992 FAX (610) 337-9939

MULRY & CRESSWELL ENV.	Project: Holme Ave.	Sampled: 5/16/00
1691 Horseshoe Pike	Project Number: Holme Ave.	Received: 5/17/00
Glenmore, PA 19343	Project Manager: Marco Droese	Reported: 6/1/00 12:42

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
Effluent-OW1	K005261-01	Water	5/16/00
Influent - OW1	K005261-02	Water	5/16/00

GLA Laboratories, Inc

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Andrea Speck, Project Manager

GLA LABORATORIES
1008 W. Ninth Avenue • King of Prussia, Pennsylvania 19406 (610) 337-9992 FAX (610) 337-9939

MULRY & CRESSWELL ENV.	Project:	Holme Ave.	Sampled: 5/16/00
1691 Horseshoe Pike	Project Number:	Holme Ave.	Received: 5/17/00
Glenmore, PA 19343	Project Manager:	Marco Droese	Reported: 6/1/00 12:42

BTEX by EPA Method 8021B
Great Lakes Analytical

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
Effluent-OW1			**K005261-01**				**Water**	
Benzene	0050616	5/26/00	5/27/00	EPA 8021B	0.500	**ND**	ug/l	
Toluene	"	"	"	EPA 8021B	0.500	**ND**	"	
Ethylbenzene	"	"	"	EPA 8021B	0.500	**ND**	"	
Total Xylenes	"	"	"	EPA 8021B	0.500	**ND**	"	
Surrogate: 4-BFB	"	"	"	*86.0-142*		*99.5*	%	

GLA Laboratories, Inc

**Refer to end of report for text of notes and definitions.*

Andrea Speck

Andrea Speck, Project Manager

GLA LABORATORIES
1008 W. Ninth Avenue • King of Prussia, Pennsylvania 19406 (610) 337-9992 FAX (610) 337-9939

MULRY & CRESSWELL ENV.	Project:	Holme Ave.	Sampled: 5/16/00
1691 Horseshoe Pike	Project Number:	Holme Ave.	Received: 5/17/00
Glenmore, PA 19343	Project Manager:	Marco Droese	Reported: 6/1/00 12:42

General Chemistry
Great Lakes Analytical

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
Effluent-OW1			**K005261-01**				**Water**	
Oil and Grease	0050460	5/18/00	5/19/00	EPA 1664	5.00	ND	mg/l	

GLA Laboratories, Inc

**Refer to end of report for text of notes and definitions.*

Andrea Speck

Andrea Speck, Project Manager

GLA LABORATORIES
1008 W. Ninth Avenue • King of Prussia, Pennsylvania 19406 (610) 337-9992 FAX (610) 337-9939

MULRY & CRESSWELL ENV.	Project:	Holme Ave.	Sampled: 5/16/00
1691 Horseshoe Pike	Project Number:	Holme Ave.	Received: 5/17/00
Glenmore, PA 19343	Project Manager:	Marco Droese	Reported: 6/1/00 12:42

Volatile Organic Compounds by EPA Method 8260A
Sequoia Analytical - Walnut Creek

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
Influent - OW1			**K005261-02**				**Water**	
Methyl tert-butyl ether	0E26019	5/27/00	5/28/00	EPA 8260A	2.0	**100**	ug/l	
Benzene	"	"	"	EPA 8260A	1.0	**120**	"	
Toluene	"	"	"	EPA 8260A	2.0	**19**	"	
Ethylbenzene	"	"	"	EPA 8260A	2.0	**67**	"	
Total Xylenes	"	"	"	EPA 8260A	20	**6500**	"	
Isopropylbenzene	"	"	"	EPA 8260A	2.0	**19**	"	
Naphthalene	"	"	"	EPA 8260A	10	**140**	"	
Surrogate: Dibromofluoromethane	"	"	"	*50-150*		*106*	%	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	*50-150*		*118*	"	
Surrogate: Toluene-d8	"	"	"	*50-150*		*104*	"	
Surrogate: 4-Bromofluorobenzene	"	"	"	*50-150*		*102*	"	

GLA Laboratories, Inc

**Refer to end of report for text of notes and definitions.*

Andrea Speck

Andrea Speck, Project Manager

GLA LABORATORIES
1008 W. Ninth Avenue • King of Prussia, Pennsylvania 19406 (610) 337-9992 FAX (610) 337-9939

MULRY & CRESSWELL ENV.	Project:	Holme Ave.	Sampled: 5/16/00
1691 Horseshoe Pike	Project Number:	Holme Ave.	Received: 5/17/00
Glenmore, PA 19343	Project Manager:	Marco Droese	Reported: 6/1/00 12:42

Notes and Definitions

#	Note
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

GLA Laboratories, Inc

Andrea Speck

Andrea Speck, Project Manager

GLA LABORATORIES

CHAIN OF CUSTODY REPORT

1008 W. NINTH AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406
(610) 337-9992 FAX (610) 337-9939

Client: Mulry + Cresswell Environmental | Bill To: Delaware | TAT: (5 DAY) 4 DAY 3 DAY 2 DAY 1 DAY < 24 HRS.

Address: 1691 Horseshoe Pike | Address: | DATE RESULTS NEEDED:

Glenmoore PA | | TEMPERATURE UPON RECEIPT: 0°C

Report to: Marco | Phone #: (610) 942-9010 Fax #: (610) 942-9039 | State & Program: | Phone #: ( ) Fax #: ( ) | AIR BILL NO.

Project: Holme Avenue

Sampler: JZ + ML

PO/Quote #:

	FIELD ID, LOCATION	DATE COLLECTED	TIME COLLECTED	SAMPLE MATRIX	PRESERVATIVES	NO. CONTAINERS	TYPE CONTAINERS	BTEX - 8021	O+G - 1664	BTEX, MTBE (8260B)	Naphthalene (8260B)	Cumene (8260B)	SAMPLE CONTROL: CONTAINERS OK? (Y/N)	SAMPLE CONTROL: pH OK? (Y/N)	SAMPLE CONTROL: GOOD CONDITION	LABORATORY ID NUMBER
1	Effluent - OW1	5/10/00	14:45	water	HCl H_2SO_4	5	40ml/1L	X	X							K0052601-01
2	Influent - OW1	5/10/00	14:35	water	HCl	3	40ml			X	X	X				+ 02
3																
4																
5																
6																
7																
8																
9																
10																

RELINQUISHED	DATE / TIME	RECEIVED	DATE / TIME	RELINQUISHED	DATE / TIME	RECEIVED
[signature]	5/16/00 2:08	[signature]	5-17-00 900			
RELINQUISHED	DATE / TIME	RECEIVED	DATE / TIME	RELINQUISHED	DATE / TIME	RECEIVED

COMMENTS:

PAGE OF

JG958198

GLA Laboratories, Inc. Work Order
K005261

Project/Client Information

Submitted By
MULRY and CRESSWELL ENV.

Project Name
Holme Ave.

Project Number
Holme Ave.

Report To
MULRY and CRESSWELL ENV.
Marco Droese
1691 Horseshoe Pike
Glenmore, PA 19343

Phone: 610-942-9010
Fax: 610-942-9039

Invoice To
MCE
NA
2 Kenley Ct.
Bear, DE 19701

Phone: 302-834-6818
Fax: N/A

Work Order Information

Project Manager
Andrea Speck

Report TAT - Due
5 day(s) - 5/24/00

Received
5/17/00 09:00

Logged In
5/17/00 16:08

Received By
Dominic

Logged In By
Jill Janson

Work Order Comments

Containers are unbroken.
Sample labels/COC agree.
Samples preserved properly.
Samples Received at 0°C

Sample/Analysis Information

LabNumber	SampleName	Matrix	Sampled/ Expires	Analysis Requested	Due	RTAT	Comments
K005261-01	Effluent - OW1	Water	5/16/00				
			5/30/00	BTEX 8021	5/24/00	5	MC
			6/13/00	O&G 1664 SUB	5/24/00	5	
K005261-02	Influent - OW1	Water	5/16/00				
			5/30/00	PADEP UG	5/24/00	5	MC

Reviewed By AJS

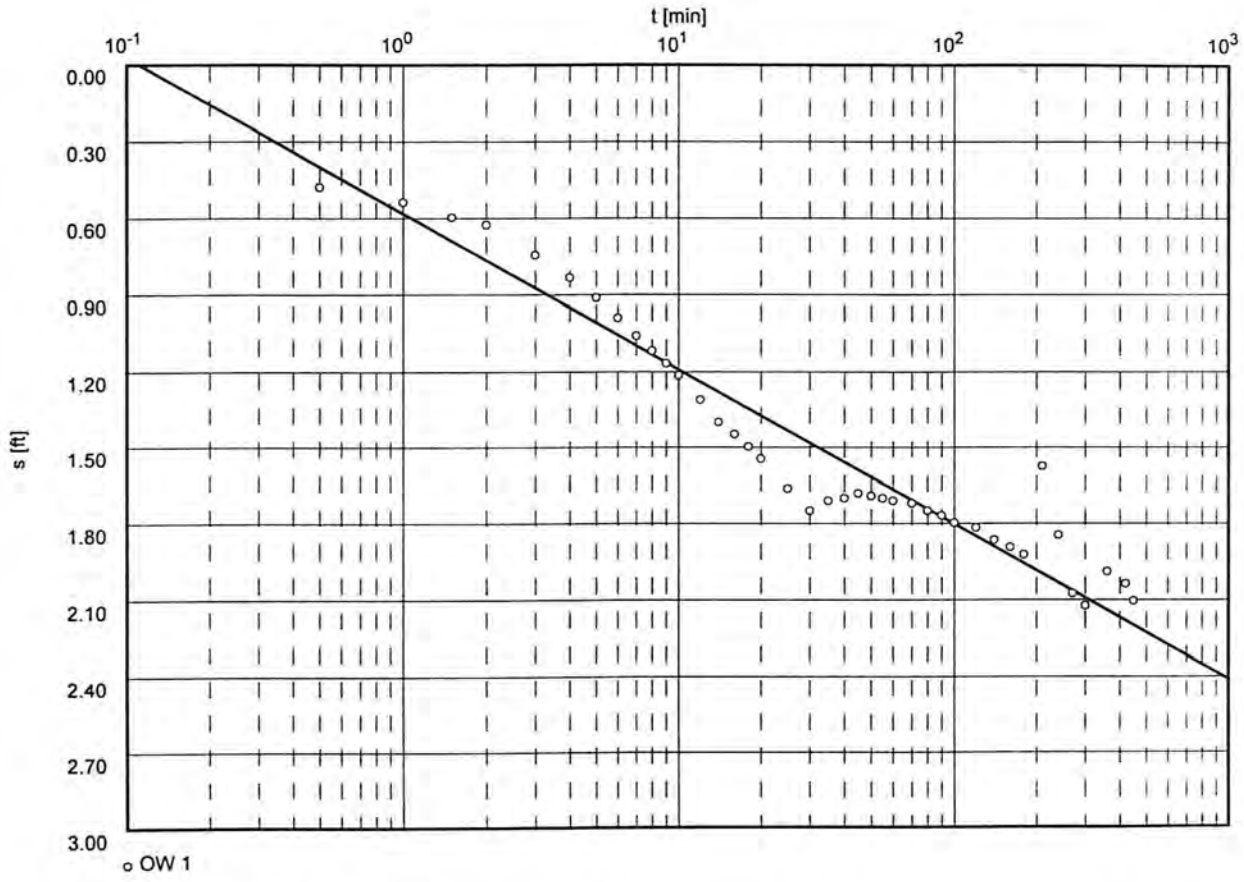
Date 5/18/00

APPENDIX C

PUMP TEST RESULTS

Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 07.06.2000	Page 1
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	
Discharge 0.36 U.S.gal/min	



Transmissivity [ft²/min]: 1.45×10^{-2}

Hydraulic conductivity [ft/min]: 2.91×10^{-4}

Aquifer thickness [ft]: 50.00

Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 07.06.2000	Page 2
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	OW 1
Discharge 0.36 U.S.gal/min	Distance from the pumping well 1.0000 ft
Static water level: 36.8600 ft below datum	

	Pumping test duration [min]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
2	0.5000	37.3400	0.4800	0.4777
3	1.0000	37.4000	0.5400	0.5371
4	1.5000	37.4600	0.6000	0.5964
5	2.0000	37.4900	0.6300	0.6260
6	3.0000	37.6100	0.7500	0.7444
7	4.0000	37.7000	0.8400	0.8329
8	5.0000	37.7800	0.9200	0.9115
9	6.0000	37.8600	1.0000	0.9900
10	7.0000	37.9300	1.0700	1.0586
11	8.0000	37.9900	1.1300	1.1172
12	9.0000	38.0400	1.1800	1.1661
13	10.0000	38.0900	1.2300	1.2149
14	12.0000	38.1900	1.3300	1.3123
15	14.0000	38.2800	1.4200	1.3998
16	16.0000	38.3300	1.4700	1.4484
17	18.0000	38.3800	1.5200	1.4969
18	20.0000	38.4300	1.5700	1.5454
19	25.0000	38.5500	1.6900	1.6614
20	30.0000	38.6400	1.7800	1.7483
21	35.0000	38.6000	1.7400	1.7097
22	40.0000	38.5900	1.7300	1.7001
23	45.0000	38.5700	1.7100	1.6808
24	50.0000	38.5800	1.7200	1.6904
25	55.0000	38.5900	1.7300	1.7001
26	60.0000	38.6000	1.7400	1.7097
27	70.0000	38.6100	1.7500	1.7194
28	80.0000	38.6400	1.7800	1.7483
29	90.0000	38.6600	1.8000	1.7676
30	100.0000	38.6900	1.8300	1.7965
31	120.0000	38.7100	1.8500	1.8158
32	140.0000	38.7600	1.9000	1.8639
33	160.0000	38.7900	1.9300	1.8928
34	180.0000	38.8200	1.9600	1.9216
35	210.0000	38.4600	1.6000	1.5744
36	240.0000	38.7400	1.8800	1.8447
37	270.0000	38.9800	2.1200	2.0751
38	300.0000	39.0300	2.1700	2.1229
39	360.0000	38.8900	2.0300	1.9888
40	420.0000	38.9400	2.0800	2.0367
41	450.0000	39.0100	2.1500	2.1038

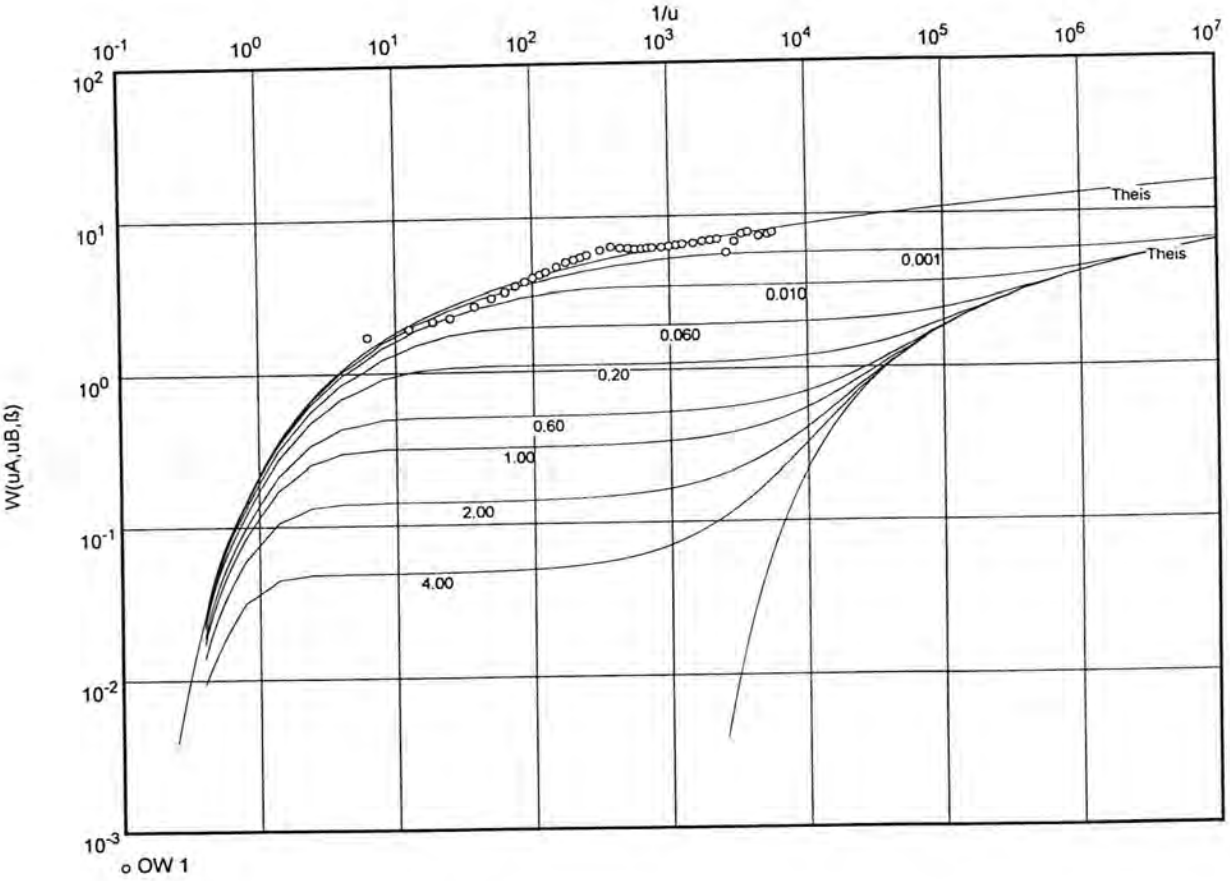
Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 07.06.2000	Page 3
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	OW 1
Discharge 0.36 U.S.gal/min	

	Pumping test duration [min]	Discharge [U.S.gal/min]		
1	0.00	0.00		
2	0.50	0.43		
3	1.00	0.43		
4	1.50	0.43		
5	2.00	0.43		
6	3.00	0.43		
7	4.00	0.43		
8	5.00	0.43		
9	6.00	0.43		
10	7.00	0.43		
11	8.00	0.43		
12	9.00	0.43		
13	10.00	0.42		
14	12.00	0.42		
15	14.00	0.42		
16	16.00	0.42		
17	18.00	0.42		
18	20.00	0.42		
19	25.00	0.42		
20	30.00	0.42		
21	35.00	0.42		
22	40.00	0.42		
23	45.00	0.42		
24	50.00	0.34		
25	55.00	0.34		
26	60.00	0.34		
27	70.00	0.34		
28	80.00	0.33		
29	90.00	0.33		
30	100.00	0.33		
31	120.00	0.33		
32	140.00	0.33		
33	160.00	0.33		
34	180.00	0.34		
35	210.00	0.34		
36	240.00	0.38		
37	270.00	0.38		
38	300.00	0.36		
39	360.00	0.36		
40	420.00	0.39		
41	450.00	0.39		
42	480.00	0.34		

Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Date: 07.06.2000	Page 1
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	
Discharge 0.36 U.S.gal/min	



Transmissivity [ft²/min]: 1.37×10^{-2}

Hydraulic conductivity [ft/min]: 2.74×10^{-4}

Aquifer thickness [ft]: 50.00

Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Date: 07.06.2000	Page 2
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	OW 1
Discharge 0.36 U.S.gal/min	Distance from the pumping well 1.0000 ft

Static water level: 36.8600 ft below datum

	Pumping test duration [min]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
2	0.5000	37.3400	0.4800	0.4777
3	1.0000	37.4000	0.5400	0.5371
4	1.5000	37.4600	0.6000	0.5964
5	2.0000	37.4900	0.6300	0.6260
6	3.0000	37.6100	0.7500	0.7444
7	4.0000	37.7000	0.8400	0.8329
8	5.0000	37.7800	0.9200	0.9115
9	6.0000	37.8600	1.0000	0.9900
10	7.0000	37.9300	1.0700	1.0586
11	8.0000	37.9900	1.1300	1.1172
12	9.0000	38.0400	1.1800	1.1661
13	10.0000	38.0900	1.2300	1.2149
14	12.0000	38.1900	1.3300	1.3123
15	14.0000	38.2800	1.4200	1.3998
16	16.0000	38.3300	1.4700	1.4484
17	18.0000	38.3800	1.5200	1.4969
18	20.0000	38.4300	1.5700	1.5454
19	25.0000	38.5500	1.6900	1.6614
20	30.0000	38.6400	1.7800	1.7483
21	35.0000	38.6000	1.7400	1.7097
22	40.0000	38.5900	1.7300	1.7001
23	45.0000	38.5700	1.7100	1.6808
24	50.0000	38.5800	1.7200	1.6904
25	55.0000	38.5900	1.7300	1.7001
26	60.0000	38.6000	1.7400	1.7097
27	70.0000	38.6100	1.7500	1.7194
28	80.0000	38.6400	1.7800	1.7483
29	90.0000	38.6600	1.8000	1.7676
30	100.0000	38.6900	1.8300	1.7965
31	120.0000	38.7100	1.8500	1.8158
32	140.0000	38.7600	1.9000	1.8639
33	160.0000	38.7900	1.9300	1.8928
34	180.0000	38.8200	1.9600	1.9216
35	210.0000	38.4600	1.6000	1.5744
36	240.0000	38.7400	1.8800	1.8447
37	270.0000	38.9800	2.1200	2.0751
38	300.0000	39.0300	2.1700	2.1229
39	360.0000	38.8900	2.0300	1.9888
40	420.0000	38.9400	2.0800	2.0367
41	450.0000	39.0100	2.1500	2.1038

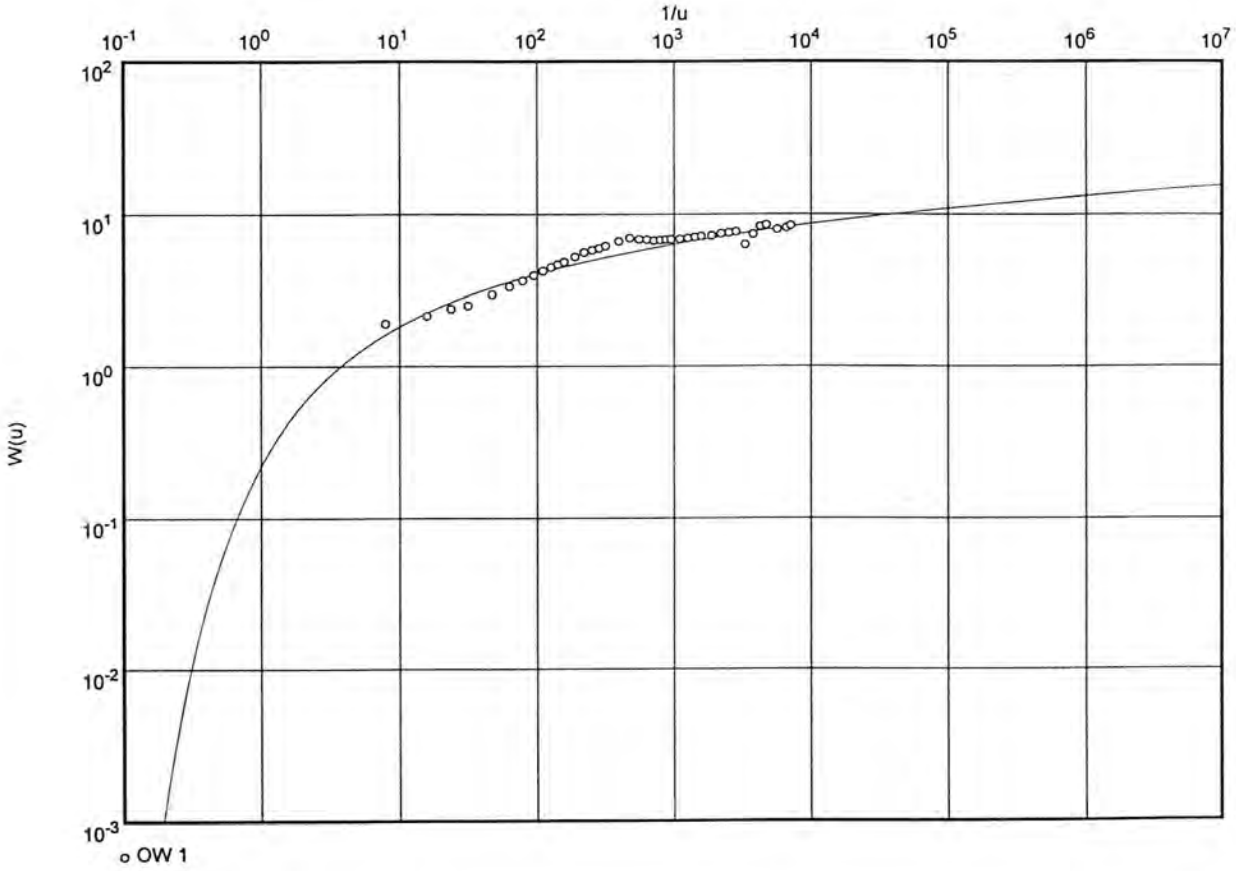
Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Date: 07.06.2000	Page 3
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	OW 1
Discharge 0.36 U.S.gal/min	

	Pumping test duration [min]	Discharge [U.S.gal/min]
1	0.00	0.00
2	0.50	0.43
3	1.00	0.43
4	1.50	0.43
5	2.00	0.43
6	3.00	0.43
7	4.00	0.43
8	5.00	0.43
9	6.00	0.43
10	7.00	0.43
11	8.00	0.43
12	9.00	0.43
13	10.00	0.42
14	12.00	0.42
15	14.00	0.42
16	16.00	0.42
17	18.00	0.42
18	20.00	0.42
19	25.00	0.42
20	30.00	0.42
21	35.00	0.42
22	40.00	0.42
23	45.00	0.42
24	50.00	0.34
25	55.00	0.34
26	60.00	0.34
27	70.00	0.34
28	80.00	0.33
29	90.00	0.33
30	100.00	0.33
31	120.00	0.33
32	140.00	0.33
33	160.00	0.33
34	180.00	0.34
35	210.00	0.34
36	240.00	0.38
37	270.00	0.38
38	300.00	0.36
39	360.00	0.36
40	420.00	0.39
41	450.00	0.39
42	480.00	0.34

Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 07.06.2000	Page 1
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	
Discharge 0.36 U.S.gal/min	



Transmissivity [ft²/min]: 1.53×10^{-2}

Hydraulic conductivity [ft/min]: 3.07×10^{-4}

Aquifer thickness [ft]: 50.00

Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 07.06.2000	Page 2
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	OW 1
Discharge 0.36 U.S.gal/min	Distance from the pumping well 1.0000 ft

Static water level: 36.8600 ft below datum

	Pumping test duration [min]	Water level [ft]	Drawdown [ft]	Corrected drawdown [ft]
2	0.5000	37.3400	0.4800	0.4777
3	1.0000	37.4000	0.5400	0.5371
4	1.5000	37.4600	0.6000	0.5964
5	2.0000	37.4900	0.6300	0.6260
6	3.0000	37.6100	0.7500	0.7444
7	4.0000	37.7000	0.8400	0.8329
8	5.0000	37.7800	0.9200	0.9115
9	6.0000	37.8600	1.0000	0.9900
10	7.0000	37.9300	1.0700	1.0586
11	8.0000	37.9900	1.1300	1 1172
12	9.0000	38.0400	1.1800	1 1661
13	10.0000	38.0900	1.2300	1 2149
14	12.0000	38.1900	1.3300	1 3123
15	14.0000	38.2800	1.4200	1.3998
16	16.0000	38.3300	1.4700	1.4484
17	18.0000	38.3800	1.5200	1.4969
18	20.0000	38.4300	1.5700	1.5454
19	25.0000	38.5500	1.6900	1.6614
20	30.0000	38.6400	1.7800	1.7483
21	35.0000	38.6000	1.7400	1.7097
22	40.0000	38.5900	1.7300	1.7001
23	45.0000	38.5700	1.7100	1.6808
24	50.0000	38.5800	1.7200	1.6904
25	55.0000	38.5900	1.7300	1.7001
26	60.0000	38.6000	1.7400	1.7097
27	70.0000	38.6100	1.7500	1.7194
28	80.0000	38.6400	1.7800	1.7483
29	90.0000	38.6600	1.8000	1.7676
30	100.0000	38.6900	1.8300	1.7965
31	120.0000	38.7100	1.8500	1.8158
32	140.0000	38.7600	1.9000	1.8639
33	160.0000	38.7900	1.9300	1.8928
34	180.0000	38.8200	1.9600	1.9216
35	210.0000	38.4600	1.6000	1.5744
36	240.0000	38.7400	1.8800	1.8447
37	270.0000	38.9800	2.1200	2.0751
38	300.0000	39.0300	2.1700	2.1229
39	360.0000	38.8900	2.0300	1.9888
40	420.0000	38.9400	2.0800	2.0367
41	450.0000	39.0100	2.1500	2.1038

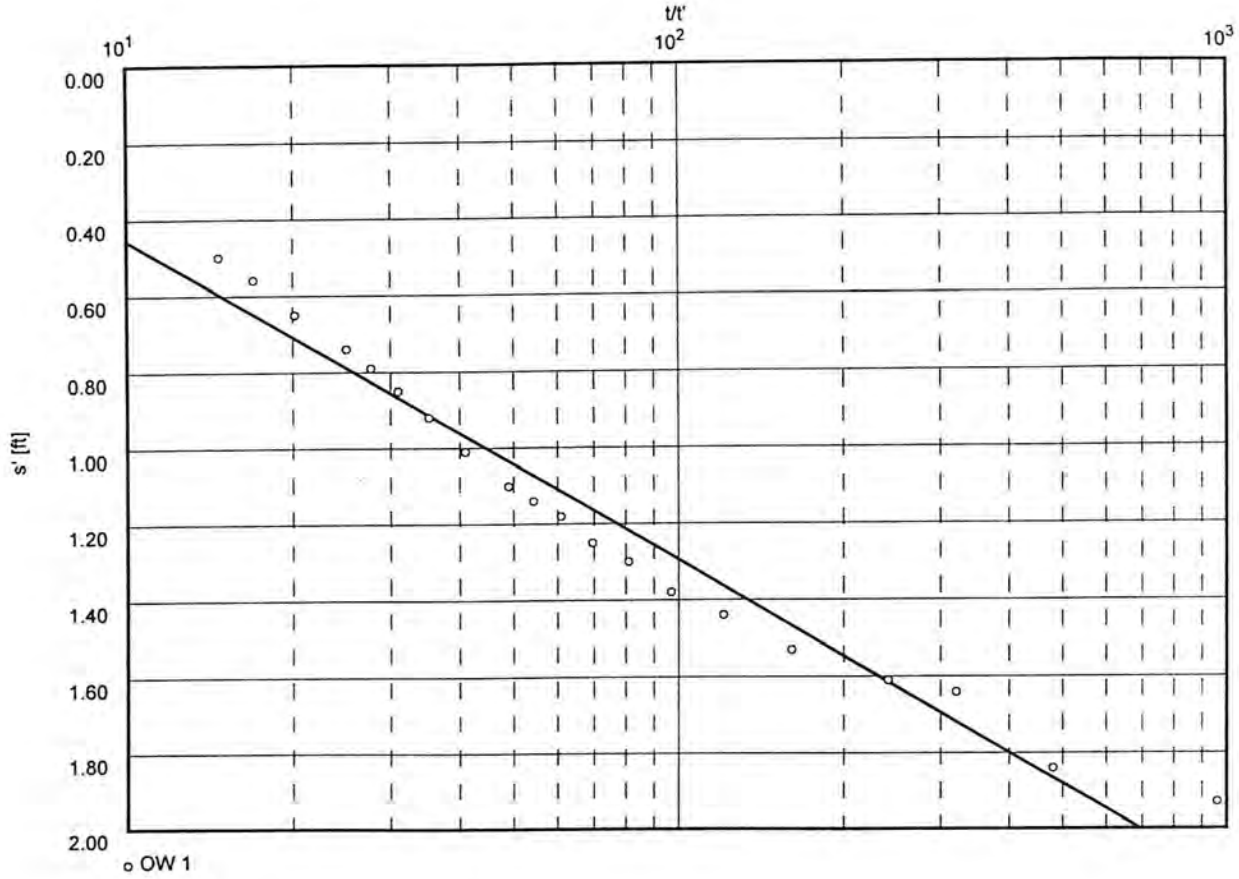
Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 07.06.2000	Page 3
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	OW 1
Discharge 0.36 U.S.gal/min	

	Pumping test duration [min]	Discharge [U.S.gal/min]		
1	0.00	0.00		
2	0.50	0.43		
3	1.00	0.43		
4	1.50	0.43		
5	2.00	0.43		
6	3.00	0.43		
7	4.00	0.43		
8	5.00	0.43		
9	6.00	0.43		
10	7.00	0.43		
11	8.00	0.43		
12	9.00	0.43		
13	10.00	0.42		
14	12.00	0.42		
15	14.00	0.42		
16	16.00	0.42		
17	18.00	0.42		
18	20.00	0.42		
19	25.00	0.42		
20	30.00	0.42		
21	35.00	0.42		
22	40.00	0.42		
23	45.00	0.42		
24	50.00	0.34		
25	55.00	0.34		
26	60.00	0.34		
27	70.00	0.34		
28	80.00	0.33		
29	90.00	0.33		
30	100.00	0.33		
31	120.00	0.33		
32	140.00	0.33		
33	160.00	0.33		
34	180.00	0.34		
35	210.00	0.34		
36	240.00	0.38		
37	270.00	0.38		
38	300.00	0.36		
39	360.00	0.36		
40	420.00	0.39		
41	450.00	0.39		
42	480.00	0.34		

Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Recovery method after THEIS & JACOB Confined aquifer	Date: 08.06.2000	Page 1
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	
Discharge 0.34 U.S.gal/min	
	Pumping test duration: 480.00 min



Transmissivity [ft²/min]: 9.91×10^{-3}

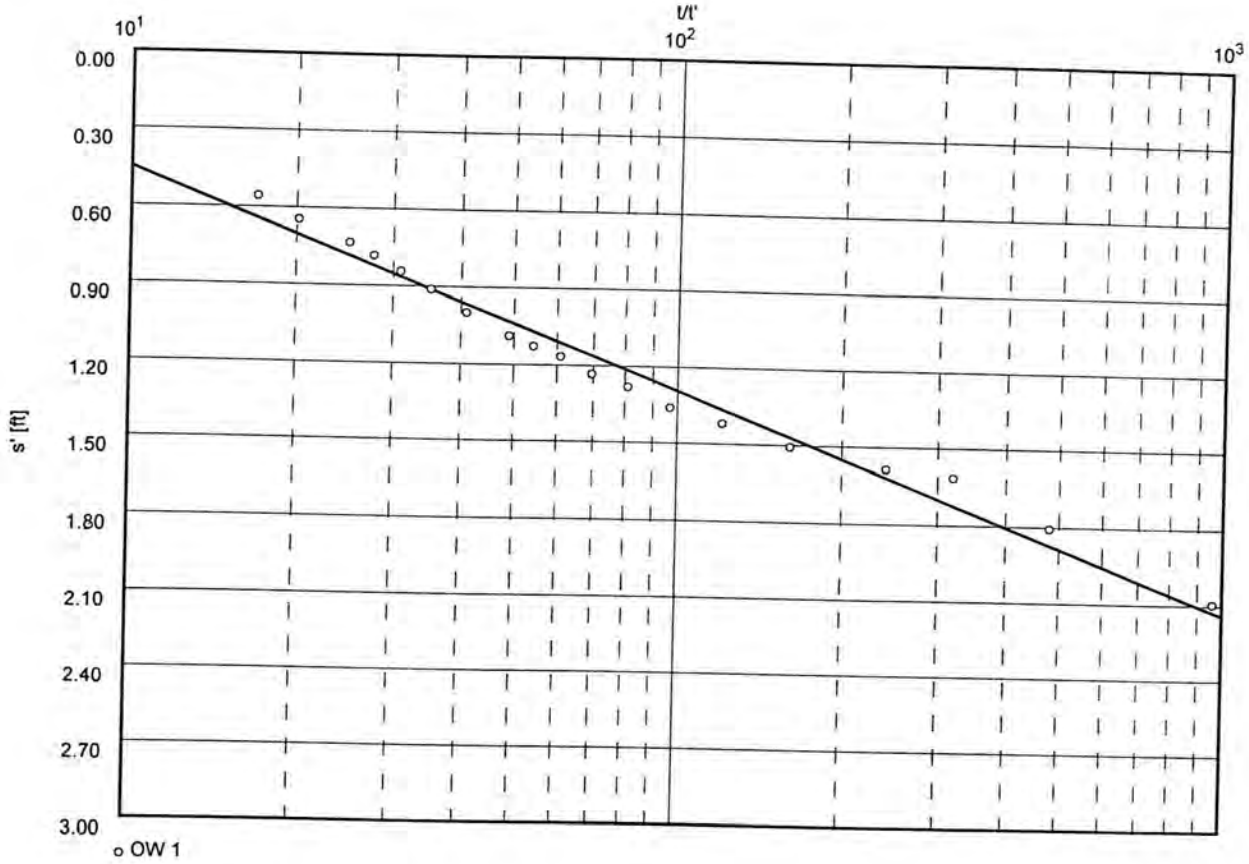
Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Recovery method after THEIS & JACOB Confined aquifer	Date: 08.06.2000	Page 2
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	OW 1
Discharge 0.34 U.S.gal/min	Distance from the pumping well 1.0000 ft
Static water level: 36.8600 ft below datum	Pumping test duration: 480.00 min

	Time from end of pumping [min]	Water level [ft]	Residual drawdown [ft]	
2	0.5000	38.7900	1.9300	
3	1.0000	38.7000	1.8400	
4	1.5000	38.5000	1.6400	
5	2.0000	38.4700	1.6100	
6	3.0000	38.3900	1.5300	
7	4.0000	38.3000	1.4400	
8	5.0000	38.2400	1.3800	
9	6.0000	38.1600	1.3000	
10	7.0000	38.1100	1.2500	
11	8.0000	38.0400	1.1800	
12	9.0000	38.0000	1.1400	
13	10.0000	37.9600	1.1000	
14	12.0000	37.8700	1.0100	
15	14.0000	37.7800	0.9200	
16	16.0000	37.7100	0.8500	
17	18.0000	37.6500	0.7900	
18	20.0000	37.6000	0.7400	
19	25.0000	37.5100	0.6500	
20	30.0000	37.4200	0.5600	
21	35.0000	37.3600	0.5000	

Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Recovery method after THEIS & JACOB Unconfined aquifer	Date: 30.06.2000	Page 1
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	
Discharge 0.36 U.S.gal/min	
	Pumping test duration: 480.00 min



Transmissivity [ft²/min]: 1.04×10^{-2}

Hydraulic conductivity [ft/min]: 2.09×10^{-4}

Aquifer thickness [ft]: 50.00

Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Recovery method after THEIS & JACOB Unconfined aquifer	Date: 30.06.2000	Page 2
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	OW 1
Discharge 0.36 U.S.gal/min	Distance from the pumping well 1.0000 ft
Static water level: 36.8600 ft below datum	Pumping test duration: 480.00 min

	Time from end of pumping [min]	Water level [ft]	Residual drawdown [ft]	Corrected drawdown [ft]
1	0.5000	39.0000	2.1400	2.0942
2	1.0000	38.7000	1.8400	1.8061
3	1.5000	38.5000	1.6400	1.6131
4	2.0000	38.4700	1.6100	1.5841
5	3.0000	38.3900	1.5300	1.5066
6	4.0000	38.3000	1.4400	1.4193
7	5.0000	38.2400	1.3800	1.3610
8	6.0000	38.1600	1.3000	1.2831
9	7.0000	38.1100	1.2500	1.2344
10	8.0000	38.0400	1.1800	1.1661
11	9.0000	38.0000	1.1400	1.1270
12	10.0000	37.9600	1.1000	1.0879
13	12.0000	37.8700	1.0100	0.9998
14	14.0000	37.7800	0.9200	0.9115
15	16.0000	37.7100	0.8500	0.8428
16	18.0000	37.6500	0.7900	0.7838
17	20.0000	37.6000	0.7400	0.7345
18	25.0000	37.5100	0.6500	0.6458
19	30.0000	37.4200	0.5600	0.5569

Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Recovery method after THEIS & JACOB Unconfined aquifer	Date: 30.06.2000	Page 3
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

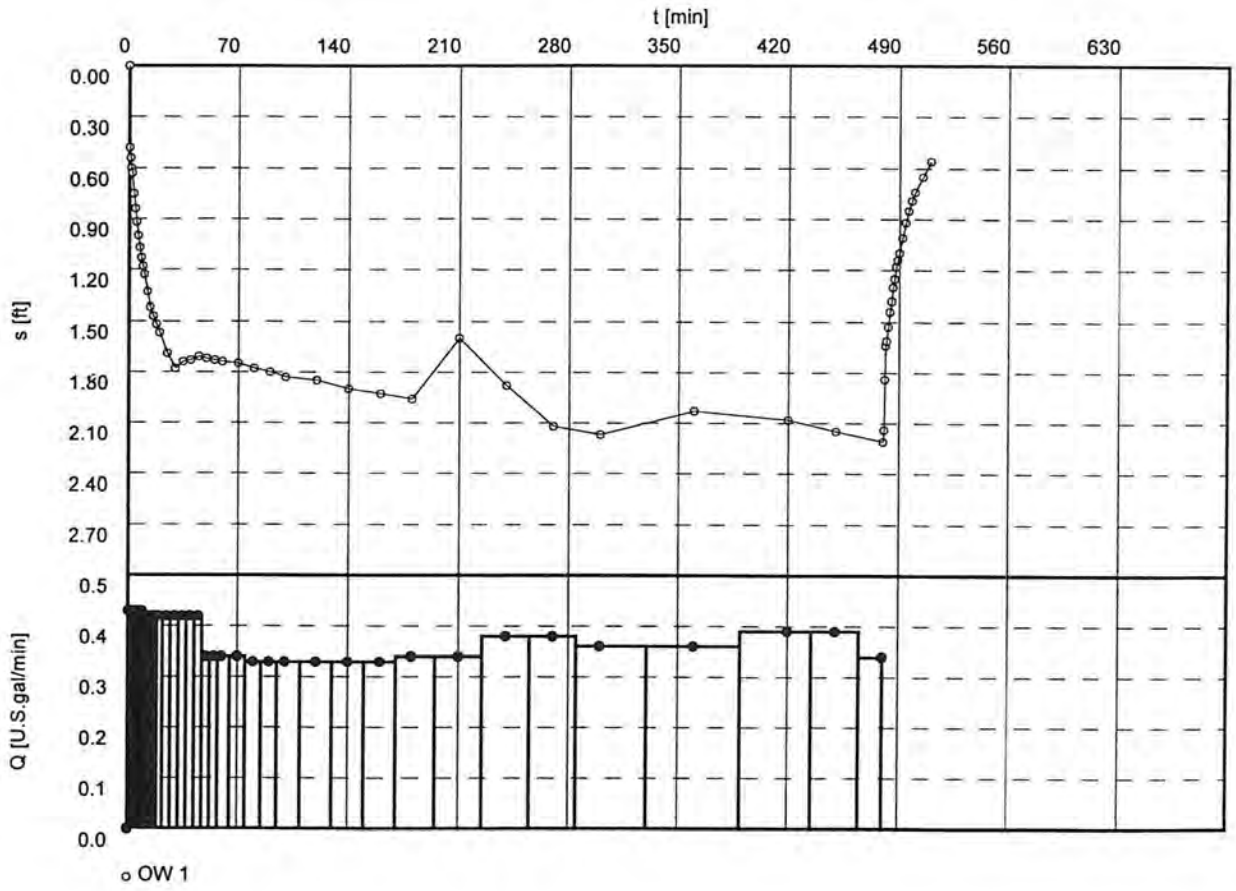
Pumping Test No.	Test conducted on: 16 May 2000
OW 1	
Discharge 0.36 U.S.gal/min	

Pumping test duration: 480.00 min

	Pumping test duration [min]	Discharge [U.S.gal/min]		
1	0.00	0.00		
2	0.50	0.43		
3	1.00	0.43		
4	1.50	0.43		
5	2.00	0.43		
6	3.00	0.43		
7	4.00	0.43		
8	5.00	0.43		
9	6.00	0.43		
10	7.00	0.43		
11	8.00	0.43		
12	9.00	0.43		
13	10.00	0.42		
14	12.00	0.42		
15	14.00	0.42		
16	16.00	0.42		
17	18.00	0.42		
18	20.00	0.42		
19	25.00	0.42		
20	30.00	0.42		
21	35.00	0.42		
22	40.00	0.42		
23	45.00	0.42		
24	50.00	0.34		
25	55.00	0.34		
26	60.00	0.34		
27	70.00	0.34		
28	80.00	0.33		
29	90.00	0.33		
30	100.00	0.33		
31	120.00	0.33		
32	140.00	0.33		
33	160.00	0.33		
34	180.00	0.34		
35	210.00	0.34		
36	240.00	0.38		
37	270.00	0.38		
38	300.00	0.36		
39	360.00	0.36		
40	420.00	0.39		
41	450.00	0.39		
42	480.00	0.34		

Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Time-Drawdown plot with discharge	Date: 30.06.2000	Page 1
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	
Discharge 0.36 U.S.gal/min	



Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Time-Drawdown plot with discharge	Date: 30.06.2000	Page 2
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	OW 1
Discharge 0.36 U.S.gal/min	Distance from the pumping well 1.0000 ft
Static water level: 36.8600 ft below datum	

	Pumping test duration [min]	Water level [ft]	Drawdown [ft]	
1	0.0000	36.8600	0.0000	
2	0.5000	37.3400	0.4800	
3	1.0000	37.4000	0.5400	
4	1.5000	37.4600	0.6000	
5	2.0000	37.4900	0.6300	
6	3.0000	37.6100	0.7500	
7	4.0000	37.7000	0.8400	
8	5.0000	37.7800	0.9200	
9	6.0000	37.8600	1.0000	
10	7.0000	37.9300	1.0700	
11	8.0000	37.9900	1.1300	
12	9.0000	38.0400	1.1800	
13	10.0000	38.0900	1.2300	
14	12.0000	38.1900	1.3300	
15	14.0000	38.2800	1.4200	
16	16.0000	38.3300	1.4700	
17	18.0000	38.3800	1.5200	
18	20.0000	38.4300	1.5700	
19	25.0000	38.5500	1.6900	
20	30.0000	38.6400	1.7800	
21	35.0000	38.6000	1.7400	
22	40.0000	38.5900	1.7300	
23	45.0000	38.5700	1.7100	
24	50.0000	38.5800	1.7200	
25	55.0000	38.5900	1.7300	
26	60.0000	38.6000	1.7400	
27	70.0000	38.6100	1.7500	
28	80.0000	38.6400	1.7800	
29	90.0000	38.6600	1.8000	
30	100.0000	38.6900	1.8300	
31	120.0000	38.7100	1.8500	
32	140.0000	38.7600	1.9000	
33	160.0000	38.7900	1.9300	
34	180.0000	38.8200	1.9600	
35	210.0000	38.4600	1.6000	
36	240.0000	38.7400	1.8800	
37	270.0000	38.9800	2.1200	
38	300.0000	39.0300	2.1700	
39	360.0000	38.8900	2.0300	
40	420.0000	38.9400	2.0800	
41	450.0000	39.0100	2.1500	
42	480.0000	39.0700	2.2100	
43	480.5000	39.0000	2.1400	
44	481.0000	38.7000	1.8400	
45	481.5000	38.5000	1.6400	
46	482.0000	38.4700	1.6100	
47	483.0000	38.3900	1.5300	
48	484.0000	38.3000	1.4400	
49	485.0000	38.2400	1.3800	
50	486.0000	38.1600	1.3000	

Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Time-Drawdown plot with discharge	Date: 30.06.2000	Page 3
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	OW 1
Discharge 0.36 U.S.gal/min	Distance from the pumping well 1.0000 ft

Static water level: 36.8600 ft below datum

	Pumping test duration [min]	Water level [ft]	Drawdown [ft]	
51	487.0000	38.1100	1.2500	
52	488.0000	38.0400	1.1800	
53	489.0000	38.0000	1.1400	
54	490.0000	37.9600	1.1000	
55	492.0000	37.8700	1.0100	
56	494.0000	37.7800	0.9200	
57	496.0000	37.7100	0.8500	
58	498.0000	37.6500	0.7900	
59	500.0000	37.6000	0.7400	
60	505.0000	37.5100	0.6500	
61	510.0000	37.4200	0.5600	

Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Time-Drawdown plot with discharge	Date: 30.06.2000	Page 4
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

Pumping Test No.	Test conducted on: 16 May 2000
OW 1	
Discharge 0.36 U.S.gal/min	

	Pumping test duration [min]	Discharge [U.S.gal/min]		
1	0.00	0.00		
2	0.50	0.43		
3	1.00	0.43		
4	1.50	0.43		
5	2.00	0.43		
6	3.00	0.43		
7	4.00	0.43		
8	5.00	0.43		
9	6.00	0.43		
10	7.00	0.43		
11	8.00	0.43		
12	9.00	0.43		
13	10.00	0.42		
14	12.00	0.42		
15	14.00	0.42		
16	16.00	0.42		
17	18.00	0.42		
18	20.00	0.42		
19	25.00	0.42		
20	30.00	0.42		
21	35.00	0.42		
22	40.00	0.42		
23	45.00	0.42		
24	50.00	0.34		
25	55.00	0.34		
26	60.00	0.34		
27	70.00	0.34		
28	80.00	0.33		
29	90.00	0.33		
30	100.00	0.33		
31	120.00	0.33		
32	140.00	0.33		
33	160.00	0.33		
34	180.00	0.34		
35	210.00	0.34		
36	240.00	0.38		
37	270.00	0.38		
38	300.00	0.36		
39	360.00	0.36		
40	420.00	0.39		
41	450.00	0.39		
42	480.00	0.34		

APPENDIX D

GROUNDWATER PUMPING AND VACUUM EXTRACTION TEST-OW 1, SOIL VAPOR INFLUENT SAMPLE LABORATORY ANALYTICAL RESULTS

Lancaster Laboratories
Where quality is a science.

LL Sample No. AQ 3383184

Collected:05/16/2000 16:50 by JZ

Submitted: 05/17/2000 19:25
Reported: 05/22/00 at 05:29 AM
Discard: 6/22/00
Influent - OW1 Grab Tedlar Bag Sample
Holme Ave., PA

Account Number: 06702

Mulry & Cresswell Enviro.
2 Kenley Court
Bear DE 19701

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Units	Dilution Factor
07045	MTBE	1634-04-4	45.	4.	mg/m3	1
07048	C2-C10 Hydrocarbons	n.a.	400.	20.	mg/m3 propane	1
07059	BTEX					
07063	Benzene	71-43-2	< 3.	3.	mg/m3	1
07064	Toluene	108-88-3	< 4.	4.	mg/m3	1
07065	Ethylbenzene	100-41-4	< 5.	5.	mg/m3	1
07068	Xylene (total)	1330-20-7	34.	9.	mg/m3	1

Commonwealth of Pennsylvania Lab Certification No. 36-037

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
07045	MTBE	EPA Method 18 & 25 modified	2	05/18/2000 12:35	David I. Ressler	1
07048	C2-C10 Hydrocarbons	EPA Method 18 & 25 modified	2	05/18/2000 12:35	David I. Ressler	1
07059	BTEX	EPA Method 18 & 25 modified	1	05/18/2000 12:35	David I. Ressler	1

Lancaster Laboratories

A division of Thermo Analytical Inc.

On 05/17/00, 1 sample was submitted to Lancaster Laboratories
Below are listed our sample numbers with your corresponding description and code.

Please refer to your Lancaster Laboratories client account number when submitting samples or corresponding with the laboratory.

***** 35.00% discount applied to all analysis charges *****

Account Number: 06702

MR JAMES MULRY
MULRY & CRESSWELL ENVIRO
1691 HORSESHOE PIKE
MANOR PROFESSIONAL BLDG STE 1
GLENMORE PA 19343

Phone: 610-942-9010
FAX : 16109429039

BILL TO: MR JAMES MULRY
MULRY & CRESSWELL ENVIRO
2 KENLEY COURT
BEAR DE 19701

Phone: 610-942-9010

P.O. NUMBER: HOLME AVE REL NUMBER: SPECIAL JOB NO: QUOTE NUMBER:

COPIES TO:
1 Mulry & Cresswell Enviro.
Mr. James Mulry
1691 Horseshoe Pike
Manor Professional Bldg, Ste 1
Glenmore PA 19343

LLI No.	Sample Code/Description	Lab Use	Tot Price	Discnt	Tot Estimate
AQ3383184	Influent - OW1 Grab Tedlar Bag Sample Holme Ave., PA Collected on 05/16/00 at 1650 by JZ Analysis Numbers:1560 7042 7045 7048 7059	G	100.00	35.00	65.00
	SUB TOTALS		100.00	35.00	65.00
	Pickup Charge				0.00
	*** ESTIMATED TOTAL				$65.00

Analysis Name	TAT days	QTY	List Price	Discount Price	Gross Estimate	Discount	Net Estimate
1560 38 Lab Chronicle	STD	1	0.00	0.00	0.00	0.00	0.00
7042 30 Whole Air Analysis by GC	STD	1	70.00	45.50	70.00	24.50	45.50
7045 30 MTBE	STD	1	10.00	6.50	10.00	3.50	6.50
7048 30 C2-C10 Hydrocarbons	STD	1	10.00	6.50	10.00	3.50	6.50
7059 30 BTEX	STD	1	10.00	6.50	10.00	3.50	6.50
Total Analysis and Prep charges					100.00	35.00	65.00
SUB TOTALS					100.00	35.00	65.00
*** ESTIMATED TOTAL					$100.00	$35.00	$65.00

BILLING ... All fees are charged or billed directly to the client. The billing of a third party will not be accepted without a statement, signed by the third party, which acknowledges and accepts payment responsibilty.

The paperwork submitted with your samples will be assumed to describe the testing protocol you desire. Any changes to this protocol must be submitted to LLI in writing. If testing is already in progress, you will be billed. (Our FAX number is 717-656-2681. Send changes to: Client Services - URGENT!)

Lancaster Laboratories reserves the right to amend this acknowledgement if the sample(s) as received require additional preparation charges.

FOR LAB USE: 715216 270 N 10 30 05/17/00 1925 DIS000 N 48 327 10 35.00 N

Lancaster Laboratories
Where quality is a science.

ANALYTICAL RESULTS

Prepared for:

Mulry & Cresswell Enviro.
2 Kenley Court
Bear DE 19701

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 715216. Samples arrived at the laboratory on Wednesday, May 17, 2000. The PO# for this group is HOLME AVE.

Client Description	Lancaster Labs Number
Influent - OW1 Grab Tedlar Bag Sample	3383184

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

I COPY TO Mulry & Cresswell Enviro. Attn: Mr. James Mulry

Questions? Contact your Client Services Representative
Carrie A. Fleming at (717) 656-2300.

Respectfully Submitted,
Donald L. Shelly Jr

APPENDIX J

Quick Domenico Model

ADVECTIVE TRANSPORT WITH THREE DIMENSIONAL DISPERSION,1ST ORDER DECAY and RETARDATION - WITH CALIBRATION TOOL

Project:	Gatz Auto		
Date:	5/28/2025	Prepared by:	RMH
		Contaminant:	Benzene (MW-1) - 30 yr

SOURCE CONC (MG/L)	Ax (ft)	Ay (ft)	Az (ft) >=.001	LAMBDA day-1	SOURCE WIDTH (ft)	SOURCE THICKNESS (ft)	Time (days) (days)
0.666	3.56E+00	3.56E-01	1.00E-03	0.000958	30	3	10950

Hydraulic Cond (ft/day)	Hydraulic Gradient (ft/ft)	Porosity (dec. frac.)	Soil Bulk Density (g/cm^{3})	KOC	Frac. Org. Carb.	Retard-ation (R)	V (=K*i/n*R) (ft/day)
3.90E-01	0.0025	0.3	1.8	58	5.00E-03	2.74	0.001186131

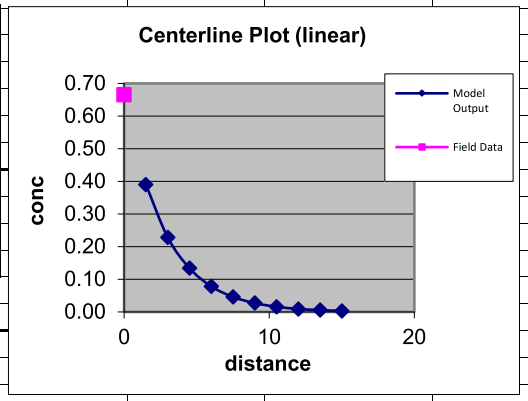
NEW QUICK_DOMENICO.XLS

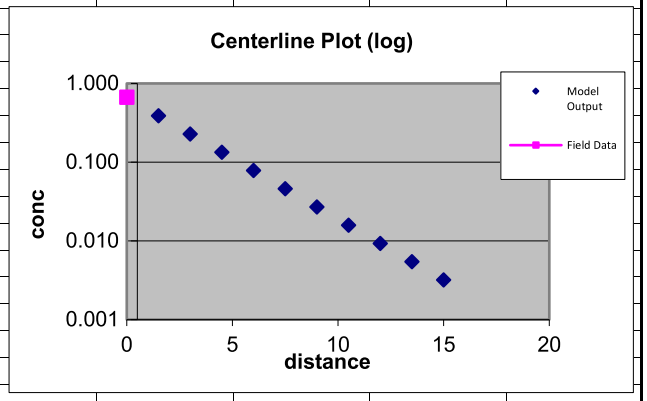
SPREADSHEET APPLICATION OF
"AN ANALYTICAL MODEL FOR
MULTIDIMENSIONAL TRANSPORT OF A
DECAYING CONTAMINANT SPECIES"
P.A. Domenico (1987)
Modified to Include Retardation

Point Concentration

x(ft)	y(ft)	z(ft)
14	0	

	x(ft)	y(ft)	z(ft)
Conc. At	14	0	0
at	10950	days =	0.005 mg/l





AREAL MODEL CALCULATION DOMAIN

Length (ft)	15
Width (ft)	15

	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15
15	0.195	0.114	0.067	0.039	0.023	0.014	0.008	0.005	0.003	0.002
7.5	0.390	0.229	0.134	0.079	0.046	0.027	0.016	0.009	0.005	0.003
0	0.390	0.229	0.134	0.079	0.046	0.027	0.016	0.009	0.005	0.003
-7.5	0.390	0.229	0.134	0.079	0.046	0.027	0.016	0.009	0.005	0.003
-15	0.195	0.114	0.067	0.039	0.023	0.014	0.008	0.005	0.003	0.002

Field Data:	Centerline C Concentration			0.666						
	Distance from Source			0						