pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

May 21, 2020

Ms. Susan Shirer
Evergreen Resources Management Operations
2 Righter Parkway, Suite 200
Wilmington, DE 19803

Re: Remedial Action Completion Report Approval
Storage Tank System Release November 23, 1999
Residential Statewide Health Standard
Facility ID No. 51-30277
Incident No. 4325
Gatz Automotive (former Sunoco Station)
2899 Holme Avenue
City and County

Dear Ms. Shirer:

The Department of Environmental Protection (DEP) reviewed the November 5, 2019 document titled Remedial Action Completion Report for the release referenced above. The document was prepared by Mulry Creswell Environmental and submitted as a Remedial Action Completion Report (RACR) as required by 25 Pa. Code Section 245.313.

On January 27, 2020, DEP sent you a letter (letter) approving the above referenced report. In the letter, DEP inadvertently added text that an environmental covenant was required, and that a draft covenant was under review for the property. The RACR demonstrated attainment of the residential Statewide health standard in soil and groundwater. DEP has determined that a Post-Remediation Care Plan (PRCP) is not necessary to meet and/or attain the Statewide health standard. Activity and use limitations as outlined in the Uniform Environmental Covenants Act (Act 68 of 2007), Title 27, Pa.C.S. Chapter 65 (UECA) are not required to meet and/or attain the Statewide health standard.

DEP does not currently require an environmental covenant for the above referenced property relative to Incident No. 4235.

Thank you for your actions in remediating this release. If you have any questions, please contact Lyle de la Rosa by email at ldelarosa@pa.gov or by telephone at 484.250.5790.

Sincerely,

Ragesh R. Patel
Regional Manager
Environmental Cleanup and Brownfields

cc: Philadelphia County Health Department
City of Philadelphia
Ms. Steiner, USTIF
Mr. Burke, ICF, Inc.
Mr. Mulry, MCE (via email)
Mr. Staron (via email)
Mr. de la Rosa
Re 30 (hmw20ecb) 142-3

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

REMEDIAL ACTION COMPLETION REPORT

FORMER SUNOCO SERVICE STATION (Duns # (0005-1078)
2899 HOLME AVENUE
CITY OF PHILADELPHIA
PHILADELPHIA COUNTY, PA

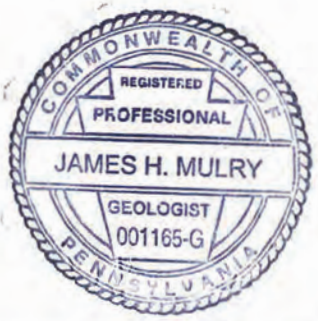
PADEP Facility ID No. 51-30277

REPORT DATE: 30 OCTOBER 2019

PREPARED FOR:

MS. SUSAN SHIRER
EVERGREEN RESOURCES MANAGEMENT OPERATIONS
2 RIGHTER PARKWAY, SUITE 200
WILMINGTON, DE 19803

PREPARED BY:
STEPHANIE SKELONIS
ENVIRONMENTAL SCIENTIST



REVIEWED BY:
JAMES H. MULRY, P.G.
SR. HYDROGEOLOGIST

(By affixing my seal to this report, I am certifying that the information presented in this report is true and correct to the best of my knowledge. I further certify that I am licensed to practice in the Commonwealth of Pennsylvania and that it is within my professional expertise to verify the correctness of the information. James H. Mulry (PG 001165-G), signed and sealed on 30 October 2019)

1679 Horseshoe Pike • Glenmoore, PA 19343 • Tel: (610) 942-9010 • Fax: (610) 942-9039
web: www.mcenvironmental.com

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EXECUTIVE SUMMARY

The subject location is currently an active retail gasoline station and automotive repair facility (Kerrigan Automotive), currently branded as a Conoco but formerly owned by Sunoco LLC and branded as a Sunoco. 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 (Figures I and II). Environmental investigation of this property was initiated by Groundwater Environmental Systems (GES) at the request of Sunoco in May 1997 for site divestment purposes.

The site was subject to active remediation by several high vacuum extraction events between October 2000 and May 2001 and later by oxygen sparging for approximately 3 year between April 2003 and April 2006, after which the system was shut down with the approval of the PADEP. Groundwater monitoring has documented the decrease in groundwater contaminant concentrations in all wells and all unleaded gasoline short list compounds now meet the residential, used aquifer, Statewide Health Standard (SHS) in samples from all onsite wells, MWs 1 through 8. Soil samples were collected from the drill cuttings of all four observation wells installed by GES on 12 May 1997 and analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX) and methyl tertiary-butyl ether (MTBE) (EPA method 8020) and semivolatile organics (EPA method 8270). Only MTBE, reported at 160 micrograms per kilogram (µg/kg) in the sample from OW 2, was reported above the analytical method detection limits. Systematic random soil samples were collected from the area of concern in March 2009. Soil samples retrieved from these borings were reported as containing BTEX, MTBE, naphthalene and cumene at concentrations below the method detection limits or at concentrations below the residential, used-aquifer ACT 2 Statewide Health Standard (SHS) residential, used aquifer medium specific concentrations (MSCs), with the exception of 1,200 µg/kg benzene reported for the sample from SB 2. The benzene data for all eight borings satisfy the 75%/10x-rule for attainment demonstration of the residential, used-aquifer MSC.

Based on characterization and continued monitoring efforts, including laboratory analytical results for groundwater samples from onsite monitoring wells and soil samples collected during environmental assessment activities and the installation of systematic random soil borings and monitoring wells, the following conclusions are presented in this Remedial Action Completion Report (RACR):

- attainment of the PA ACT 2 SHS, used aquifer, residential area is demonstrated for benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene and cumene in soil at this site; and
- attainment of the PA ACT 2 SHS, used aquifer, residential area is demonstrated for dissolved benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene and cumene in groundwater at this site.

1.0) SITE LOCATION AND GENERAL DESCRIPTION

The subject location is a Conoco branded active retail gasoline station and automotive repair facility operated under the name Kerrigan Automotive, located at 2899 Holme Avenue in the City of Philadelphia, Philadelphia County, Pennsylvania. The Conoco Station is on the northwestern corner of Holme Circle between Holme Avenue and Welsh Road, located approximately 100’ above mean sea level at

40° 3' 23.8" N latitude and 75° 1' 44.5" W longitude in a relatively flat lying area. As depicted on Figures I and II, Site Location and Surrounding Properties, the site is located in a mixed commercial business and residential area. The subject property is bordered by a sandwich shop to the north, by a strip shopping center to the west, by Welsh Road to the east, and by Holme Avenue to the south.

The property is approximately 0.41 acres with a one-story slab on grade masonry office and three automotive repair bays occupying approximately 2,800 square feet. Only gasoline fuel is stored and sold at this location and there are no tanks or dispensers for other products (kerosene, etc.) besides the current active underground storage tank (UST) system consisting of three 8,000-gallon underground storage tanks (USTs) that were installed in March 1982. These three tanks are used for unleaded gasoline. There are six gasoline dispensers, three located on one island south (in front) of the Convenience Store Building and three on an island north of the UST field. See Figure III, Site Plan.

The site, including where the underground storage tanks (USTs), dispensers and product delivery lines are located, is entirely covered with asphalt and concrete, with the exception of a small area north of (behind) the station building that has mulched landscaping and trees, and a similar patch of landscaping along the sidewalk of Holme Avenue, which also contains mulching and trees.

2.0) SITE CHARACTERIZATION

2.1) SITE HISTORY, HISTORIC REPORTS AND SITE CONCEPTUAL MODEL:

2.1.1) Site History and Historic Reports

Historic environmental site activities conducted by Groundwater and Environmental Services, Inc. (GES) and Mulry and Cresswell Environmental, Inc. (MCE) on behalf of Sunoco were presented in detail in the following reports, which were submitted to the PADEP at the time of publication:

- Environmental Assessment Report (GES), 4 June 1997;
- Quarterly Project Status Update Reports (GES), 4th quarter 1997 – 1st quarter 1999 and 3rd quarter 1999;
- Remedial Feasibility Study (MCE), 11 August 2000;
- Remedial Action Plan (MCE), 25 August 2000;
- Remedial Action Plan (MCE), 9 October 2002;
- Quarterly Project Status Update Reports (MCE), 1st quarter 2000 – 1st quarter 2019.

The historic environmental site activities since 1997 can be summarized as follows:

At the request of Mr. Bradford L. Fish of Sunoco, Groundwater and Environmental Services, Inc. (GES) conducted an environmental assessment at the subject location in 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 Pennsylvania Department of Environmental Protection (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 multi-database search were conducted.

Soil samples were collected from the drill cuttings of four observation wells on 12 May 1997 and analyzed for BTEX and MTBE (EPA method 8020) and semi-volatiles (EPA method 8270). Only MTBE, reported at160 µg/kg in the sample from OW 2, was reported above the analytical method limit detection. Soil samples laboratory analytical results are summarized in Table I.

Historic liquid level gauging data and water table elevations are presented in Table II and historic dissolved benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary butyl ether (MTBE), naphthalene and cumene data are summarized in Table III. In addition to the analytes listed in Table II, 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 compounds were reported above the method detection/quantification limit for samples from 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.

GES initiated a quarterly groundwater monitoring program in October 1997. Historic groundwater gradient magnitudes were relatively consistent between approximately 0.20% and 0.50%, but varied in direction from to the north-northeast to the west and to the south-southeast. The data through August 2002 were presented in the RAP, and the data through January 2007 were presented in the Quarterly Project Status Update Reports, which were prepared by MCE since the first quarter 2000.

On 23 December 1997, C&S Contractors on behalf of the station owner upgraded the dispensers and transfer lines at the site. Twelve post-excavation soil grab samples were collected from approximately four feet below grade surface during the upgrading activities and analyzed for BTEX, MTBE, naphthalene, cumene, benzo(a)anthracene, and benzo(a)pyrene. Sampling locations are presented on Figure IVa, and laboratory analytical results are summarized in Table I. As presented in Table I, all analytes were reported below method detection/quantification limits or below the PADEP Act 2 Statewide Health Standard used aquifer, residential medium specific concentrations (MSCs), with the exception of BTEX, MTBE, naphthalene and cumene reported for the sample retrieved from the western-most dispenser, disp-1, and benzene, naphthalene and cumene reported for neighboring disp-2. The laboratory analytical reports are contained in Appendix A.

Based on these data, the western portion of the unleaded gasoline dispenser area was identified as the source area for the COCs in soil: BTEX, MTBE, naphthalene and cumene. The reported BTEX, naphthalene and cumene concentrations ranged between below method detection limits and 2,960,000 µg/kg, MTBE was reported at between below method detection limits and < 20,000 µg/kg. Based upon the results of soil samples analyses, concentrations of toluene, ethylbenzene, total xylenes and MTBE in one (1) of the twelve (12) samples, and concentrations of benzene, naphthalene and cumene in two (2) of the twelve (12) samples collected exceeded the Pennsylvania Department of Environmental Protection (PADEP) Act 2 Statewide Health Standards (SWHS) for soil above used aquifers in residential areas.

At the request of Mr. Fish of Sunoco, Mulry and Cresswell Environmental Inc., (MCE) assumed site responsibilities and continued the quarterly groundwater monitoring program at this location in February 2000.

On 16 May 2000, MCE conducted a short term (8 hours) groundwater pumping and soil vapor extraction test on OW 1. Methodologies and results were presented in MCE's Remedial Feasibility Study Report dated 11 August 2000.

On 25 August 2000, MCE prepared a Remedial Action Plan (RAP), proposing to install two additional wells to complete the site characterization, and to conduct "hot spot" remediation by means of four total fluids extraction tests.

On 12 October 2000, MCE installed two additional wells (OWs 5 and 6) to further characterize the extent of soil and groundwater contamination in the vicinity of potential source areas.

Vacuum truck, high vacuum extraction total fluids recovery tests were conducted on OWs 2 and/or 6 on 24 October and 5 December 2000, and on 6 February, 14 March and 3 May 2001 in order to lower residual concentrations of select chemicals of concern in these wells, in particular MTBE. Monarch Transport Inc., of Woodstown, New Jersey, supplied the vacuum trucks, and also arranged for the proper disposal of the extracted liquids.

On 9 October 2002, MCE submitted a Remedial Action Plan to the PADEP proposing an oxygen injection system utilizing ten (10) oxygen injection wells located on site to stimulate bio-remediation of petroleum impacted groundwater. On behalf of Sunoco, Mulry and Cresswell Environmental, Inc. (MCE) submitted a *Remedial Action Plan* (RAP) to the Pennsylvania Department of Environmental Protection (PADEP) on 9 October 2002. The RAP was prepared to characterize soil and groundwater and to evaluate remediation strategies for elevated concentrations of methyl tertiary butyl ether (MTBE). The chemicals of concern (COCs) at this site are the pre-2008 PADEP-short list of regulated compounds for unleaded gasoline release sites: benzene, toluene, ethylbenzene, total xylenes (BTEX), MTBE, naphthalene and cumene.

On 20 November 2002, MCE personnel supervised the soft digging of ten (10) proposed injection well locations. Subsequently, on 6 and 9 December 2002, MCE personnel supervised the installation of the 10 injection wells IWs 1 – 10.

On 28 April 2006, MCE made a Submission of a Petition for Cessation of Active Remediation in the 1st Quarter 2006 Quarterly Project Status Update Report to PADEP, Southeast Regional Office.

On 14 June 2006, PADEP approved Petition for Cessation of Active Remediation and MCE subsequently shut down the oxygen injection remediation system, which had operated since 14 April 2003.

On 19 March 2009, MCE installed two additional monitoring wells, OW 7 and OW 8, near the western, inferably downgradient property boundary, to serve as point of compliance (POC) wells.

On 26 March 2009, MCE installed eight systematic random cell soil borings at the area of concern for the chemicals of concern in soil at this site. Soil samples retrieved from these borings were reported as containing BTEX, MTBE, naphthalene and cumene at concentrations below the method detection limits or at concentrations below the residential, used-aquifer ACT 2 Statewide Health Standard (SHS) medium specific concentrations (MSCs), with the exception of 1,200 µg/kg benzene reported for the sample from SB 2. The benzene data for all eight borings satisfy the 75%/10x-rule for attainment demonstration of the residential, used-aquifer SHS. Methodologies and results of the soil attainment sampling program were presented in MCE's Quarterly Remedial Action Progress Report – 1st quarter 2009, dated 20 April 2009. The analytical results are summarized in Table I and the soil sample locations are shown in Figure IVb. The laboratory analytical reports are contained in Appendix A.

On 26 March 2009, MCE also installed two soil gas sampling points, VPs 1 and 2, in proximity to the on-site station building, at PADEP-approved locations. Soil gas samples were collected on 9 April and 10 June 2009. None of the chemicals of concern were reported above the soil vapor standard equal to the residential indoor air criteria times a transfer factor of 100 for any sampling point and event.

On 29 January, 8 February and 25 March 2010, MCE personnel conducted short-term groundwater purging events on OWs 5, 7 and/or 8 in an effort to lower residual dissolved COC concentrations in the target wells. Quantified groundwater recovery rates per well were as high as 115 gallons over 45 minutes.

Groundwater monitoring, first conducted in May 1997, continued quarterly through April 2019. Post remediation groundwater sampling was initiated July 2006, and attainment groundwater sampling of all eight onsite wells was conducted on 17 July 2017, 11 October 2017, 19 January 2018, 23 April 2018, 11 July 2018, 16 October 2018, 10 January 2019 and 23 April 2019. During the last 8 groundwater sampling events, there were no concentrations of any chemicals of concern (COCs) that exceeded the current Act 2 SHS residential, used aquifer, medium specific concentrations (MSCs) in any onsite monitoring well, with the exception of benzene in OW 1 and OW 2, and MTBE in MW 5, MW 6 during only one or two of the eight attainment sampling events.

2.1.2) Site Conceptual Model:

The site and immediately surrounding area (adjacent properties) is fairly flat lying, at an approximate elevation of 100 to 110 feet above mean sea level. Regionally, the topography slopes away gradually towards the southeast, towards the Delaware River, located over 2 miles from the site.

The site conceptual model is graphically depicted on Figure V. The site is located north of Holme Ave and west of Welsh Road, in Philadelphia, Philadelphia County, Pennsylvania. The site is bordered to the north by a Dunkin' Donuts and residential homes beyond that, by Welsh Road and Rita's water Ice, a 7/11 convenience store and other businesses to the east, by Holme Avenue and Immaculate Mary Healthcare, arehab facility and residential homes to the south, and by a shopping center to the east. OWs 1 through 4 were installed by GES in 1997, OWs 5 and 6 were installed by MCE in October 2000, and OWs 7 and 8 were installed in March 2009. Beginning in May 1997, depth to water has been gauged in wells at the site at between approximately 30.07 and 39.64 feet below the top of casing (btoc). The depth to identifiable weathered schist

(saprolite) is approximately 25 to 50 feet bg and competent schist has been encountered between approximately 25' and beyond 50' bg. The chemicals of concern (COCs) in soil and groundwater at this site are the pre-March 2008 PADEP short list of regulated compounds for unleaded gasoline release sites, namely benzene, toluene, ethylbenzene, total xylenes, (BTEX), methyl tertiary butyl ether (MTBE), naphthalene and cumene. Figure V, *Site Conceptual Model*, depicts a generalized west to east schematic cross section of the site, which depicts the locations of the three 8,000-gallon underground storage tanks (USTs) that were installed in 1982 and the six dispensers that were upgraded in 1997. The groundwater gradient and inferred direction of groundwater flow over the past 26 quarterly gauging events between February 2013 and April 2019 is summarized in Table IV. As shown in the table, the average inferred static groundwater flow was toward the southwest across the site under an approximate gradient of 0.015 ft/ft, or 1.5%).

Based on the historical data, possible past gasoline releases to the shallow subsurface may have occurred at the dispenser areas or surface spills at the dispensers may be the sources of the hydrocarbon concentrations in soil and groundwater at the site. Wells OWs 1, 2, 3, 4, 5 and 6, installed near the central portions of the station property surround the current dispensers, and are north, east and west of the current UST field, and are presumed to be near-source area, onsite, wells that historically reported the highest concentrations of benzene, toluene, ethylbenzene, total xylenes, naphthalene and MTBE in groundwater samples collected from those wells. Wells OWs 7 and 8 are located near the downgradient, west and southwestern, property lines and while at one time concentrations of benzene, MTBE and naphthalene exceeded the statewide health standard (SHS) medium specific concentrations (MSCs) in these wells, all concentrations have been reported as below the SHS MSCs during the eight most recent attainment sampling events conducted between July 2017 and April 2019.

In December 1997, during dispenser and transfer line upgrade activities, C&S Contractors collected 12 post excavation soil samples from approximately 4 feet bgs at the locations of the dispensers and lines. The samples were analyzed for BTEX, MTBE, naphthalene, cumene, benzo(a)anthracene and benzo(a)pyrene. The soil sample locations are depicted in Figure IVa and the analytical results are summarized in Table I. All analytes were reported at concentrations below the current SHS MSC (soil to groundwater, used aquifer, residential), with the exception of BTEX, MTBE, naphthalene and cumene reported for the sample collected from disp-1, and benzene, naphthalene and cumene reported for the sample collected from disp-2. MCE no longer has a copy of the laboratory analytical reports for these soil samples, but had previously submitted a summary in the 9 October 2002 Remedial Action Plan.

Soil samples were also collected from the drill cuttings of all four observation wells, OWs 1-4, on 12 May 1997 and were analyzed for BTEX, MTBE (EPA method 8020) and semi-volatiles (EPA method 8270). No analyte was reported above the method detection/quantification limit for the samples retrieved from 28-30 feet below grade surface (bgs) from OWs 1, 3 and 4. For the sample collected from 28-30 feet bgs from OW 2 no analyte was reported above the method detection/quantification limit with the exception of MTBE, reported at 160 µg/kg. This value is below the 2,000 ug/kg SHS MSCs for soil.

On 26 March 2009, MCE installed soil borings located by using a systematic random cell coordinate generator to determine sampling locations in the area of concern, where

soil samples Disp-1 and Disp-2 were collected. The soil samples were analyzed for the chemicals of concern in soil at this site, BTEX, MTBE, naphthalene and cumene. Analyses of the soil samples from these borings reported BTEX, MTBE, naphthalene and cumene at concentrations below the method detection limit or at concentrations below the most stringent Act 2 cleanup standard (Statewide Health Standard (SHS) soil to groundwater pathway for used aquifers in residential areas), with the exception of 1,200 µg/kg benzene in the sample from SB 2. The benzene concentrations reported for all eight soil samples satisfy the 75%/10x-rule for attainment demonstration of the residential used aquifer SHS. On 26 March 2009, MCE also installed two soil gas sampling points, VPs 1 and 2, in proximity to the on-site station building, at PADEP-approved locations. Soil gas samples were collected on 9 April and 10 June 2009. No chemicals of concern were reported in the soil gas samples at concentrations above the residential indoor air criteria times a transfer factor of 100.

Based on the laboratory analyses of soil samples collected from grab samples from beneath the product dispensers and lines and from the eight systematic random soil borings, soil contamination by BTEX, MTBE, naphthalene and cumene at concentrations greater than the SHS MSCs has occurred in very limited areas beneath the former dispenser area (Disp-1 and Disp-2). See Figure IVa and Table I.

Groundwater sampling, which has included analyses for the pre-March 2008 PADEP target chemicals for unleaded gasoline, has documented historic concentrations of benzene, toluene, ethylbenzene, total xylenes, MTBE and naphthalene at concentrations above the SHS used aquifer MSCs in samples from on-site wells OWs 1, 2, 3, 4, 5, 6, 7 and 8 during the quarterly monitoring program. Cumene was never reported at a concentration that exceeded the SHS MSCs. OWs 7 and 8 are downgradient on site Point of Compliance monitoring wells that verify groundwater contamination has not migrated offsite. As displayed in Table II, during the eight most recent attainment groundwater samples, no target compound concentration exceeded the SHS residential, used aquifer MSCs in groundwater.

There was no groundwater impact at concentrations above the SHS residential MSCs reported for groundwater samples collected from the onsite wells during the eight-quarter attainment-sampling period, from July 2017 through April 2019.

The dermal exposure pathway for soil and groundwater and the ingestion exposure pathway for soil are incomplete because detected concentrations of COCs in soil and groundwater are located beneath asphalt and concrete ground cover.

The ingestion pathway for groundwater is incomplete as the site and surrounding properties are connected to the public water supply. As depicted on Figure I, the nearest surface water bodies to the site are: an intermittent stream, which is a tributary of Wooden Bridge Run and is situated approximately 900 feet north of the site; and Pennypack Creek, which flows north to south approximately 2,000 feet west of the site. Groundwater quality data collected to date indicate that groundwater quality in all of the on-site wells, located at upgradient and downgradient property boundaries, currently meets the SHS residential, used aquifer MSCs, as demonstrated by analyses of water samples from all OWs 1 – 8, and this condition is anticipated to continue in the future.

As depicted in Figures VIa – VIh, and fairly consistent with the historical variations in direction of flow of the water table elevation plots, the groundwater gradients from

17 July 2017 through 23 April 2019 have varied from to the south, to the west, and to the northwest with an average direction to the southwest and an average magnitude of approximately 0.005 ft/ft (0.5 %). Table IV contains inferred groundwater flow directions and hydraulic gradients during the past 26 quarters conducted since February 2013. Groundwater occurs under water table conditions at between approximately 30.1' and 39.6' below the top of the well casing (flush to grade well heads) beneath the site, with an average depth to water for all wells over the gauging period of 35'. Table II contains historic well gauging and groundwater elevation data.

Based on the average groundwater gradients displayed in Table IV, Wells OWs 2, 3, 4 and 6 installed near the central and eastern portions of the property, are considered up gradient wells and source area wells, OWs 1, 5, 7 and 8, located along the western property boundaries are considered point of compliance (POC) wells. Groundwater samples were analyzed from all observation wells, OWs 1 - 8, during eight consecutive quarterly sampling events between July 2017 and April 2019 for demonstration of attainment of an Act 2 standard (attainment).

The site is currently an active retail gasoline facility and automotive repair facility (Kerrigan Automotive). The on-site station building on the western portion of the Site is the only building within 30 feet of the former source areas (UST field and dispenser islands). Water is supplied to the site and surrounding area by Philadelphia Water Department. There are no known wells within at least a half mile radius of the site as reported on the Pennsylvania Groundwater Information System (PaGWIS), with the exception of 8 monitoring or observation well records, including several for this site, and one well listed as destroyed. It should be noted that in the well search results, two wells are listed as withdrawal wells, however they were two wells installed at the station property as monitoring wells that have been mis-labeled in the well information system. A copy of the well search results are contained in Appendix B. Based on the concentrations of dissolved COCs in the onsite wells, which have been below the SHS MSCs for all samples for the last eight quareters, MCE does not anticipate any further offsite impact from hydrocarbons dissolved in groundwater.

2.2) REGULATORY CONTACT:

Ms. Lauren Mapleton
PADEP Southeast Regional Office
2 East Main Street
Norristown, PA 19401

2.3) WORK COMPLETED DURING REPORT PERIOD:

In addition to a summary of historical environmental data, this report describes the results of environmental work conducted since the submission of the 1st Quarter 2019 Remedial Action Progress Report, dated 30 April 2019, which includes:

- Quarterly liquid level gauging of monitoring wells OWs 1 through 8 on 23 April 2019;
- Quarterly sampling of monitoring OWs 1 through 8 on 23 April 2019 with analyses for BTEX, MTBE, naphthalene and cumene by method SW- 846 8260B;

- Generation of the Remedial Action Completion Report, including selection of and demonstration of attainment of a combination of the ACT 2 Statewide Health Standard for groundwater and soil.

2.4) GEOLOGY:

The Geologic Map of Pennsylvania (1980, 1:250,000) shows the area to be underlain by mica schist of the Wissahickon Formation. As reported by GES in 1997 and previously summarized in historic reports submitted to the PADEP by MCE, drilling activities during the installation of the observation wells OWs 1, 2, 3 and 4 indicated that the site is underlain by at least 40 feet of unconsolidated weathering products of the underlying metamorphic rock, various mixtures of sand, silt and clay. Bedrock was reportedly not encountered during the installation of the original four wells, which were installed to total depths of approximately 40 feet below grade surface (bgs).

OWs 5 and 6 were installed by B.L. Myers Bros. and MCE on 12 October 2000, and OWs 7 and 8 were installed by B.L. Myers Bros and MCE on 19 March 2009. In OW 5, silty clay and clayey silt and sand, coarsening with depth, were observed beneath asphalt and fill material, and extended from approximately 8 inches to approximately 16 feet bgs. This was underlain by weathered schist (saprolite), which extended from approximately 16 to 37 feet bgs, the depth at which dark grey schist bedrock was encountered, extending to the total drilling depth of approximately 50 feet bgs.

In OW 6, silty clay and clayey silt and sand, coarsening with depth, were observed beneath asphalt and fill material, and extended from approximately 8 inches to approximately 15 feet bgs. Saprolite was encountered at approximately 15 feet bgs and extended to approximately 50 feet bgs.

In OW 7, silty clay, silt and clayey silt, coarsening with depth, were observed beneath asphalt and ballast material, and extended from approximately 6 inches to approximately 41 feet bgs. This was underlain by brown weathered schist, which extended to the total drilling depth of approximately 50 feet bgs.

In OW 8, brown clay and silty clay were observed beneath asphalt and ballast material, and extended from approximately 6 inches to approximately 15 feet bgs. This was underlain by brown silt, which extended from approximately 15 to 25 feet bgs, the depth at which brown to gray brown weathered schist was encountered, with the top of the bedrock occurring at 30 feet bgs and extending to the total depth of approximately 50 feet bgs.

Soil borings and wells installed by MCE and others have primarily encountered the weathering products of the underlying metamorphic rock, silty, sand and clay, which increases in coarseness and grades into the underlying schist bedrock. The depth to identifiable weathered schist (saprolite) is approximately15 feet bgs. Competent schist has been encountered between approximately 30’ and 37’ bgs, or was not encountered at all in some borings up to total depths of 50’ bgs. Soil Boring and Well Drilling Logs for all soil borings and observation wells are attached in Appendix C.

2.5) HYDROGEOLOGY :

As shown in Table II, Water Table Elevations, groundwater occurs under water table conditions at approximately thirty to forty feet below grade (bg). The water table elevation has fluctuated approximately ten feet in site wells from May 1997 through April 2019. The water table gradient across the site is to the southwest with an average magnitude of 0.005 ft/ft (0.5%) reported between July 2017 and April 2019, and a larger average magnitude of 0.014 ft/ft (1.4%) reported between February 2013 and April 2019.

Between May 1997 and April 2009, a total of eight groundwater observation wells were installed by GES and MCE at the site: OWs 1 through 8. The wells are all four-inch diameter, installed to between forty and fifty feet bgs and constructed with approximately ten to fifteen feet of PVC riser pipe and thirty to forty feet of slotted PVC well screen. Well construction details are summarized in the drilling logs attached in Appendix C.

Water table elevation contour maps for the liquid level gauging events conducted in conjunction with the eight attainment quarterly liquid level gauging and sampling events, conducted between 17 July 2017 and 23 April 2019 are graphically depicted on Figures VIa – VIh. Groundwater gradients and inferred groundwater flow directions calculated for the gauging events conducted on all observation wells between 4 February 2013 and 23 April 2019 are summarized in Table IV.

Hydrographs for OWs 1 through 8 for the period May 1997, or more recently depending on the date the wells were installed, through April 2019 are presented in Figure VII. Maximum water table fluctuations have been approximately eight to ten feet in all wells.

On 16 May 2000 a groundwater pumping test was performed on OW 1. Subsequent to measuring static water table elevations in all observation wells, a submersible pump was deployed into OW 1. The methodologies and results of the groundwater pumping test were reported in the Remedial Feasibility Study submitted to PADEP on 11 August 2000.

Data was collected electronically (by submersible pressure transducers) during the 480 minute (8 hour) pumping test conducted on OW 1 with simultaneous soil vapor extraction for approximately 120 minutes. The water level measurements collected 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 D. 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 close agreement for the pumping well for all evaluation methods shown above. The average values for the aquifer parameters were calculated as:

Transmissivity T = 0.0135 ft2/min;
Hydraulic Conductivity Ks = 0.00270 ft/min (0.39 ft/day)

Based on 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.

2.6) DISSOLVED CONCENTRATIONS OF CHEMICALS OF CONCERN:

Groundwater samples have been collected from OWs 1 - 4 from May 1997 through April 2019, OWs 5 and 6 from 10 November 2000 through April 2019, and OWs 7 and 8 from 7 April 2009 through April 2019. Between 17 July 2017 and 23 April 2019, eight consecutive attainment quarterly groundwater sampling events were conducted, with OWs 1 – 8 being sampled for all sampling events. All groundwater samples have been analyzed for the dissolved chemicals of concerns (COCs) identified at this site: BTEX, MTBE, naphthalene and cumene. The analyses were performed by Eurofins Lancaster Laboratories Environmental (ELLE) of Lancaster, PA, utilizing methods SW-846 8260B. The results of the eight quarterly attainment groundwater sampling events, with the exception of the last event, conducted on 23 April 2019, were presented to the PADEP in the Quarterly Groundwater Monitoring Reports prepared for the 3rd Quarter 2017 through the 1st Quarter 2019 and are also presented in this Remedial Action Completion Report, with the inclusion of the last, 23 April 2019, event. A summary of historic groundwater samples laboratory analytical data, including the data obtained during the attainment sampling phase, are summarized in Table III: *Historic Dissolved Volatile Organics.*

Copies of the laboratory analysis report for the most recent quarterly attainment sampling event, 23 April 2019, is attached in Appendix E. As displayed in Table III and on the laboratory reports, for all eight quarterly attainment sampling events, all parameters were at or below the Act 2 SHS residential, used aquifer MSCs for groundwater samples collected from the site, with the exception of benzene in one sample from OW 1 and in two samples from OW 2, and MTBE in one sample from OW 5 and one sample in OW 6.

As presented in Table III, in samples from all of the wells where dissolved concentrations of benzene or MTBE have been reported at concentrations above the SHS, OWs 1, 2, 5 and 6, are upgradient or near source area wells, and reported concentrations have been decreasing over time or have consistently been reported at concentrations below the MSCs for several years.

As presented in Table III, concentrations of all COCs were reported below method detection/quantification limits and/or below the used aquifer SHS MSCs for the groundwater samples retrieved from all down gradient onsite POC wells, OWs 7 and 8, during the eight attainment quarterly sampling events, July 2017 through April 2019.

3.0) SENSITIVE RECEPTOR SURVEY:

The investigated site is located on the northwestern corner of the intersection of Holme Avenue and Welsh Road in the city of Philadelphia, Philadelphia County, Pennsylvania in a mixed residential and commercial area. See Figures I and II. The onsite service station building is the only structures located within 30 feet of the source areas (UST field and dispenser islands), and the next closest building is a residence with a basement located approximately 200 feet north of the site.

The nearest surface water body to the site is an intermittent stream which is a tributary of Wooden Bridge Run and is situated approximately 900 feet north of the site. Pennypack Creek flows north to south approximately 2,000 feet west of the site. According to the survey data compiled in February 1996 by the PADEP Water Well Drillers Licensing/Records Section, Bureau of Topographic and Geologic Survey in Harrisburg, no privately owned potable water supply wells were located within the investigated area. Potable water is generally publicly supplied within the City of Philadelphia. According to GES, a representative of the Philadelphia Water Department indicated that the site and surrounding area receive its water supply from the Baxter Treatment Plant, which derives its raw water from the Schuylkill and Delaware River. MCE also conducted a records search utilizing the Pennsylvania Geological Survey Groundwater Information System (PAGWIS) to identify the locations of any water supply wells within a half mile radius of the site and identified 9 well records. Of the 9 records reported, eight were listed as monitoring or observation wells at the subject site, and one well was a record from 1923 that was listed as an unused and destroyed well.

Ecological Receptor Survey:

The site, which is located in an urbanized, primarily commercial and also residential setting, is largely paved. The area of contaminated soil is less than one (1) acre, the site has features such as buildings and paved surfaces that eliminate soil exposure and any residual contamination at this site is from virgin petroleum products. In addition, MCE completed a Pennsylvania Natural Diversity Inventory (PNDI) Environmental Project Review. Based on the PNDI report, there is potential concern of impacts to threatened or endangered species or special concern species and resources within the project area, as noted by the Pennsylvania Department of Conservation and Natural Resources, and the Pennsylvania Fish and Boat Commission. The PA Department of Conservation and Natural Resources noted that special conservation measures should be considered for the Willow Oak. Additional information regarding the project was submitted to the PA Department of Conservation and Natural Resources and the PA Fish and Boat Commission, and as presented on the attached 11 September 2019

correspondence from the PA Department of Conservation and Natural Resources and the 29 October 2019 correspondence from the Pennsylvania Fish and Boat Commission, both agencies indicated there is no anticipated impact to species or resources located within the vicinity of the project. The PNDI project review reports and supplemental information are contained in Appendix F.

4.0) HISTORIC ACTIVE REMEDIATION:

The site has been subject of several vacuum truck, high vacuum extraction, total fluids recovery tests that were conducted on OWs 2 and/or 6 in order to lower residual concentrations of select chemicals of concern in these wells; MTBE in particular. On 24 October 2000, approximately 95 gallons of liquid were removed during approximately 5 hours of total fluids extraction from OW 2. On 5 December 2000, approximately 131 gallons of liquid were removed during approximately 2 hours of total fluids extraction from OW 2 and 2 hours of total fluids extraction from OW 6. On 6 February 2001, approximately 159 gallons of fluids were removed during approximately 150 minutes of total fluids recovery from OW 2 and approximately 160 minutes of total fluids recovery from OW 6. On 14 March 2001, approximately 485 gallons of fluids were removed during approximately 30 minutes of total fluids recovery from OW 2 and approximately 265 minutes of total fluids recovery from OW 6. On 3 May 2001, total fluids extraction high vacuum extraction tests were again conducted on OWs 2 and 6. During the 120 minutes of vacuum extraction on each well, a total of approximately 276 gallons of fluids were removed on that date.

The site was subject to remediation via oxygen sparging for approximately three years from April 2003 through June 2006. On 9 October 2002, MCE submitted a Remedial Action Plan to the PADEP proposing an oxygen injection system utilizing ten (10) oxygen injection wells located on site to stimulate bio-remediation of petroleum impacted groundwater.

On 6 and 9 December 2002, MCE personnel supervised the installation of the 10 injection wells IWs 1 – 10 and on 10 and 11 December 2002, MCE personnel conducted trenching for the installation of electrical conduit and lines for the proposed oxygen injection system. The oxygen injection system was started on 14 April 2003. Refer to the attached Figure VIII, Oxygen Injection Remediation System Layout, for the locations of the injection well points and the equipment trailer and to Table V for a summary of observation well and injector well (sparge point) point construction.

As presented in Figure VIII, the groundwater remediation system consisted of ten (10) oxygen injection wells, IWs 1 through 10. Air injection lines connected to the remediation trailer were deployed in each of the wells, which were drilled to total depths of approximately fifty feet. The injection wells were constructed of two-inch diameter PVC with a two-foot section of well screen (0.020”slot) at the bottom of each point. The remediation trailer injected oxygen into the injection wells (IWs 1 – 10), thereby creating an underground source of oxygen- and bio-enriched process water.

On 28 April 2006, MCE submitted a Petition for Cessation of Active Remediation in the 1st Quarter 2006 Quarterly Project Status Update Report to the PADEP, Southeast Regional Office in favor of continued monitored natural attenuation, with fate and transport modeling documenting that concentrations of benzene, MTBE and

naphthalene would not migrate off site. The petition was approved by the PADEP on 14 June 2006.

In addition, on 29 January, 8 February and 25 March 2010, MCE personnel conducted short-term groundwater purging events on OWs 5, 7 and/or 8 in an effort to lower residual dissolved COC concentrations in the target wells. Quantified groundwater recovery rates per well were as high as 115 gallons over 45 minutes.

5.0) ATTAINMENT OF ACT 2 CLEANUP STANDARDS

5.1) DEMONSTRATION OF ATTAINMENT FOR BTEX, MTBE, NAPHTHALENE AND CUMENE IN SOIL:

Soil sampling and analyses were conducted on this site in 1997 during the UST systems dispenser and line removal activities and well installations, and in 2009 when systematic random soil borings were installed. These efforts included:

- Installation of 4 monitoring wells (OWs 1 – 4) with soil sample collection and analyses on 12 May 1997 by GES;
- UST system dispenser upgrades, including the removal of dispensers and transfer lines with soil samples collected beneath each one (DISP 1-5 and 9-12 and PIPING 6-8) on 23 December 1997 by GES; and
- Soil sampling from 8 systematic random soil boring locations (SBs 1 – 8) in March 2009 by MCE.

As displayed in Table I, Soil Samples Analytical Results, soil samples collected from the installation of 4 monitoring wells (OWs 1-4) reported all concentrations of all the parameters below the laboratory method detection limit, or at concentrations below their respective SHS MSCs. MTBE, reported at 160 µg/kg, was the only parameter detected above the laboratory method detection limit. Cumene was not analyzed for in these samples.

Ten soil samples collected from the removal of gasoline dispensers on 23 December 1997, reported all concentrations of all the parameters below the laboratory method detection limit, or at concentrations below their respective SHS MSCs, with the exception of all parameters reported for DISP-1, and benzene and naphthalene reported for adjacent DISP-2.

Systematic random cell soil borings were installed by the direct push (Geoprobe®) drilling method on 26 March 2009 in the area where soil samples DISP-1 and DISP-2 were collected. As displayed in Table I, all concentrations of all parameters for SB 1 – 8, were reported below the laboratory method detection limit, or at concentrations below the SHS MSC for a residential used aquifer, with the exception of benzene, reported at a concentration greater than the SHS MSC for a residential used aquifer (1,200 µg/kg in the sample from SB-2 6.8'). Based on the results of these systematic random soil samples, with only one sample out of eight samples reporting one parameter at a concentration that exceeds the SHS MSC (87.5% of the samples meet the benzene MSC), but not exceeding 10x the SHS MSC for benzene, these samples satisfy the statistical requirements for demonstration of attainment of the SHS for soil in a used aquifer (Section 250.707).

The locations of all soil samples are shown on Figures IVa and IVb, and the exceedances are shown in Table I, with copies of the laboratory analytical reports from 1997 and 2009 contained in Appendix A. In addition all parameters in all twenty four samples were reported at concentrations less than the residential direct contact MSC, with the exception of benzene, total xylenes and naphthalene in the sample collected from DISP-1. That sample was collected from approximately 4 feet below grade surface in an area capped by asphalt and concrete so as to in accessible and not of concern.

As presented in Table I, site soil samples were reported as containing the following:

- between below method limits of quantification (LOQ) (<5 μg/kg and 57,200 μg/kg) benzene, with only two samples, DISP-1 and DISP-2, reported as containing benzene at concentrations above the used aquifer SHS MSC of 500 μg/kg;
- between below LOQs (<5 μg/kg) and 1,360,000 μg/kg toluene, with only one sample, DISP-1, reported as containing toluene at a concentration above the used aquifer SHS MSC of 100,000 μg/kg;
- between below LOQs (<5 μg/kg) and 414,000 μg/kg ethylbenzene, with only one sample, DISP-1, reported as containing ethylbenzene at a concentration above the used aquifer SHS MSC of 70,000 μg/kg;
- between below LOQs (<5 μg/kg) and 2,960,000 μg/kg total xylenes, with only one sample, DISP-1, reported as containing total xylenes at a concentration above the used aquifer SHS MSC of 1,000,000 μg/kg;
- below LOQs (<4 μg/kg and <20,000 μg/kg) MTBE, with only one sample, DISP-1, reported as containing MTBE at a concentration below the LOQ, but with the LOQ above the used aquifer SHS MSC of 20,000 μg/kg;
- between below LOQs (<4 μg/kg) and 193,000 μg/kg naphthalene, with only two samples, DISP-1 and DISP-2, reported as containing naphthalene at concentrations above the used aquifer SHS MSC of 10,000 μg/kg;
- between below LOQs (<4 μg/kg) and 25,500 μg/kg cumene, with all LOQs and cumene concentrations reported below the residential used aquifer SHS MSC of 84,000 μg/kg for all samples.

With regard to the soil to indoor air pathway, in three soil samples, DISP-1 and DISP-2 at 4' bgs, and SB-2 at 6.8' bgs of the 2009 systematic random soil samples, benzene was reported at concentrations which exceed the indoor air screening value of 130 µg/kg. In addition, in all of the 2009 systematic random soil samples, benzene was reported at concentrations that were below the LOQ, but the LOQ exceeds the indoor air screening value.

Refer to Table I, which presents a summary of the analytical results for all 24 soil samples collected at this site; and to Figures IVa and IVb, which show the soil sample locations. Also presented in Table I are the following SHS MSCs and screening values for each of the COCs:

- the residential, used aquifer soil-to-groundwater MSCs for soils;
- the residential soil to indoor air screening values; and
- the residential, direct contact MSCs for soils.

Refer to Appendix A for copies of the laboratory analytical reports associated with the soil samples presented in Table I.

All COC concentrations in 1997 and 2009 soil samples meet the following SHS MSCs:

- the residential/non-residential, used aquifer soil-to-groundwater MSCs for toluene, ethylbenzene, total xylenes, MTBE, naphthalene and cumene in soil;
- the residential/non-residential, used aquifer soil-to-groundwater MSCs for benzene by application of the 75%/10x statistical requirements for attainment of the standard;
- the residential/non-residential, direct contact MSC for soils for toluene, ethylbenzene, MTBE and cumene;
- the residential/non-residential soil to indoor air screening value for toluene, ethylbenzene, total xylenes, MTBE, naphthalene and cumene in soils.

5.1.1) Residential, Used Aquifer, Statewide Health Standard (SHS) for Benzene, Toluene, Ethylbenzene, Total Xylenes, MTBE, Naphthalene and Cumene in Soil:

The demonstration of attainment of the SHS for benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene and cumene in soil beneath 2899 Holme Avenue is based upon the systematic random cell soil boring samples analytical results presented in Table I. As shown in Table I, analyses of seven, 87.5%, of the 8 soil samples collected from the area where two of the Dispenser replacement soil samples exceeded the SHS MSCs reported concentrations of benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene and cumene that demonstrate attainment of the residential, used aquifer soil to groundwater and residential direct contact SHS MSCs. With greater than 75% of all systematic random cell attainment soil samples containing concentrations of benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene and cumene below the residential, used aquifer soil to groundwater and residential direct contact SHS MSCs, and no sample containing any target compound at a concentration ten times the MSC, attainment of the SHS is demonstrated for these compounds in soil.

5.1.2) Direct Contact and Ingestion Pathway Evaluation:

Benzene, total xylenes and naphthalene were reported at a concentration in soil above the PADEP “Direct Contact” MSC in the soil sample collected from beneath DISP-1. The direct contact and ingestion exposure pathway for benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene and cumene in soil is deemed incomplete at this site because the soil is located beneath an impermeable, asphalt and concrete, surface (cap).

Regarding direct contact with or ingestion of contaminated groundwater, there is no surface water on the site and no access to groundwater on the site other than through the observation wells, which are sealed with a locking cap under a bolt-down manhole lid and will be abandoned following approval of this RACR. The site is connected to a municipal water supply, as are all surrounding properties. As presented below, groundwater samples meet the SHS MSC on site, and contamination does not extend beyond the site in the down gradient direction (south and west) and no exposure to contaminated groundwater offsite is expected.

5.1.2.1) Inhalation of Soil Vapor:

The PADEP published the Land Recycling Program Technical Guidance Manual – Section IV.A.4: Vapor Intrusion into Buildings from Groundwater and Soil under the Act 2 Statewide Health Standard was revised in January 2017. The use of this guidance is recommended by the PADEP to evaluate the potential indoor air inhalation pathway under the SHS. According to the guidance, a potential indoor air inhalation pathway exists if an inhabited building is located within 30 horizontal feet and 5 vertical feet of petroleum contamination. There are no residential or non-residential buildings within the 30 foot proximity distance of the area of reported concentrations of soil contamination with benzene, toluene, ethylbenzene, total xylenes, naphthalene and cumene, specifically the areas where soil samples were collected from DISP-1 and DISP-2. The onsite store is of slab on grade construction, with no basement or below grade component. Based on these data, volatilization of BTEX, naphthalene and cumene from soil to indoor air is an incomplete exposure pathway at this site. For MTBE, the 30' proximity distance does not apply, and a potential indoor air inhalation pathway exists if an inhabited building is located within 100 horizontal feet of petroleum contamination. The onsite station building is located 40 feet from the area of concern, and the potential volatilization of MTBE is a potential exposure pathway at this site.

Prior to the development of the new vapor intrusion guidance, two soil gas points (VP 1 and VP 2) were installed on site to evaluate the potential for vapor intrusion to the site building in the locations depicted on Figure III. The area in which the soil vapor sampling points were installed is covered by asphalt and the asphalt cover extends from the source areas (UST field and dispenser islands) to the onsite building. On 9 April 2009, soil gas sampling events were conducted on VPs 1 and 2 and two grab samples were collected from each point using six-liter summa canisters. A second soil gas sampling event was conducted on 9 June 2009.

The soil gas samples were analyzed for BTEX, MTBE, naphthalene and cumene. The results of the soil gas samples are contained in Table VI, Soil Gas Samples Laboratory Analytical Results. As shown in Table VI, all concentrations of all parameters were below PADEP near source and sub-slab residential/non-residential MSCs for both sampling events. Based on these data, volatilization of BTEX, MTBE, naphthalene and cumene from soil to indoor air is an incomplete exposure pathway at this site.

Based on the soil gas data evaluation presented above, vapor inrusion from soil to indoor air does not result in unacceptable exposure levels for the referenced COCs at this site.

5.1.2.2) Ecological Impact:

There is no exposure for ecological impact at the site because this site is a commercial property with the surface largely paved or covered by the onsite building. No stressed vegetation has been observed onsite. A Pennsylvania Natural Diversity Inventory (PNDI) project review was conducted, and the Project Review Report, including additional review comments from the Pennsylvania Fish and Boat Commission and the PA Department of Conservation and Natural Resources are attached as Appendix F.

5.1.2.3) Soil-to-Groundwater Exposure Pathway:

As noted in Section 5.1.2, petroleum-impacted soil that was encountered at the former dispensers, above the water table beneath portions of the site satisfies the statistical requirements for attainment of the SHS. The site is covered by an impermeable surface (cap) at 2899 Holme Avenue. Maintenance of the cap over those portions of these properties where there is potentially residual soil contamination will eliminate the possibility of inhalation or ingestion of contaminated soil and also reduce the potential for soil to groundwater transfer of petroleum compounds at rates or concentrations greater than has historically occurred.

5.1.2.4) Site-Use Restrictions:

There are no site-use restrictions that will be necessary for the continued attainment of the SHS for benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene and cumene soil beneath 2899 Holme Avenue.

5.2) DEMONSTRATION OF ATTAINMENT FOR BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENES (BTEX), METHYL TERT. BUTYL ETHER (MTBE), NAPHTHALENE AND CUMENE IN GROUNDWATER:

5.2.1) Statewide Health Standard for Benzene Toluene, Ethylbenzene, Total Xylenes, MTBE, Naphthalene and Cumene in Groundwater:

The chemicals of concern (COCs) in groundwater for this site are the PADEP pre-2008 short list of regulated compounds for unleaded gasoline release sites: BTEX, MTBE, naphthalene and cumene. The PA ACT 2 Statewide health standard (SHS), residential area, used aquifer, Medium Specific Concentrations (MSCs) for the COCs at this site are:

Benzene:	5 μg/l;
Toluene:	1,000 μg/l;
Ethylbenzene:	700 μg/l;
Total Xylenes:	10,000 μg/l;
MTBE:	20 μg/l;
Naphthalene:	100 μg/l; and
Cumene:	840 μg/l.

(ACT 2, 24 Nov. 2001, amended 2011 and 2015, Table 1)

Historic dissolved BTEX, MTBE, naphthalene and cumene for samples collected from all wells for all historic sampling events conducted since May 1997 and for the eight consecutive quarterly groundwater attainment sampling events conducted between 17 July 2017 and 23 April 2019 are summarized in Table III. The dissolved COC data reported for the quarterly sampling events conducted between July 2017 and April 2019 are also presented on Figures VIa through VIh. Copies of the groundwater samples laboratory analytical reports for the most recent quarterly groundwater attainment sampling event, 23 April 2019, are attached in Appendix E, analytical reports for the other seven attainment sampling events have been submitted to PADEP previously in Remedial Action Progress Reports (RAPR). The data presented in Table III demonstrates that the concentrations of all COCs meet the SHS non-residential used

aquifer MSCs for all samples collected from all wells over the last eight quarters, with the following exceptions:

- OW 1, benzene in one of the eight samples;
- OW 2, benzene in two of the eight samples;
- OW 5, MTBE in one of the eight samples; and
- OW 6, MTBE in one of the eight samples.

As discussed in Section 2.5 above, historic groundwater gradients have generally been to the southwest with an approximate average magnitude of 0.014 ft/ft or 1.4%. Based on this gradient, MWs 1, 5, 7 and 8 are located at the inferred down gradient property boundary and are therefore considered point-of-compliance (POC) wells for demonstrating attainment of a cleanup standard at this site. MWs 2, 3, 4 and 6, located on the central and eastern portion of the property and are near or adjacent to the pump island and tank field source areas, are considered source area wells. The well locations are depicted on Figures Va through Vh.

By application of the 75%, 10X statistical test, PA Code 250.707, to the analytical results for samples from OW 1 and OW 2for the last eight quarters, as presented in Table III, attainment of the SHS residential, used aquifer MSC is demonstrated for all target compounds, including benzene and MTBE.

Groundwater attainment samples laboratory analytical data for the eight consecutive quarters between 17 July 2017 and 23 April 2019 for all the wells are presented in Table III.

5.2.1.1) Groundwater to Indoor Air Pathway Evaluation

Similar to the discussion above in section 5.1.2.2 regarding the potential for vapor intrusion from contaminated soil, the evaluation of the potential groundwater to indoor air pathway for dissolved benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene and cumene is conducted in accord with the *Land Recycling Program Technical Guidance Manual For Vapor Intrusion into Buildings from Groundwater and Soil under Act 2.*

By attaining the used-aquifer SHS MSCs, ingestion and dermal contact are incomplete exposure pathways. To ensure the potential groundwater to indoor air pathway is not of concern, a comparison of COC concentrations in site groundwater to PADEP groundwater to indoor air screening values is made below.

As presented in the Act 2 Technical Guidance Manual, Section IV.A.4, for residential properties, PA residential volatilization to indoor air screening values for dissolved COCs at this site are:

Benzene	23 μg/l;
Toluene	34,000 μg/l;
Ethylbenzene	700 μg/l;
Total xylenes	10,000 μg/l;
MTBE:	6,300 μg/l;
Naphthalene	100 μg/l;

Cumene 1,900 μg/l.

The maximum dissolved concentrations for all wells during the eight quarterly attainment sampling events are:

Benzene, 8 μg/l;
Toluene, <1 μg/l;
Ethylbenzene, 1 μg/l;
Total Xylenes, 2 μg/l;
MTBE, 29 μg/l;
Naphthalene, 33 μg/l; and
Cumene,< 5 μg/l.

These maximum groundwater concentrations are well below the aforementioned residential screening values.

Based on a comparison of these maximum groundwater concentrations to the residential indoor air screening values, volatilization from groundwater to indoor air is not an exposure pathway of concern.

5.2.1.2) Evaluation of Potential Diffuse Groundwater to Surface Water Discharge:

The potential for diffuse groundwater to surface water discharge for all dissolved organic COCs is evaluated using the methodologies and tabulated screening values provided in the PADEP Land Recycling Program Technical Guidance Document, v.1, May 2002.

The nearest surface water body to the site is an intermittent stream, which is a tributary of Wooden Bridge Run and is situated approximately 900 feet north of the site. Pennypack Creek flows north to south approximately 2,000 feet west of the site.

The following compounds are excluded from further surface water evaluation when the SHS MSCs are met: benzene, MTBE and cumene (Table IV1 of the guidance document).

As presented in Table II, benzene, MTBE and cumene meet the SHS MSCs in all the wells and further surface water evaluation is not required for these compounds.

For the remaining compounds, the following lower surface water quality (LSWC) levels are published (Tables IV-2 and IV-3 of the guidance document):

Toluene: 330 μg/l;
Ethylbenzene: 580 μg/l;
Total Xylenes: 210 μg/l; and
Naphthalene: 43 μg/l.

As presented in Table III, dissolved toluene, ethylbenzene, total xylenes and naphthalene concentrations were reported below the LSWC for groundwater samples retrieved from all onsite wells. Based on these data, no further diffuse groundwater to

surface water discharge potential evaluation is required for dissolved toluene, ethylbenzene, total xylenes and naphthalene.

5.2.1.3) Ingestion of Groundwater

There is no open exposure pathway for the ingestion of groundwater containing benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene and cumene as public water is supplied to the property and surrounding properties. There are no water supply wells on the subject property or in the roadways that surround the site and groundwater at the down gradient POC wells meets the used aquifer SHS. Ingestion of contaminated groundwater is therefore not an open exposure pathway.

6.0) SUMMARY AND REQUEST FOR RELEASE OF LIABILITY:

It was demonstrated in Section 5.1 above that the SHS is demonstrated for benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene and cumene in soil. It was demonstrated in Section 5.2, that dissolved benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene and cumene were reported below method quantitation limits and/or at concentrations that are statistically satisfy the requirements for demonstrating attainment of the residential, used-aquifer SHS MSCs for groundwater samples retrieved from all wells, including POC wells, during eight consecutive quarterly groundwater attainment sampling events. It was presented in Section 5.2.2 through 5.2.2.3 that all exposure pathways are incomplete for the COCs in soil and groundwater. In Section 5.2.2.2, it was demonstrated that there is no potential for diffuse groundwater to surface water discharge for any of the dissolved COCs at this site.

Based on the data available to MCE and presented in this report, MCE on behalf of Sunoco respectfully requests that a release of liability be granted by the Department for demonstrated attainment of the residential, used-aquifer Act 2 SHS for benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene and cumene in soil and groundwater at this site.

7.0) REFERENCES:

Geologic Map of Pennsylvania (1980, 1:250,000);

Engineering Characteristics of the Rocks of Pennsylvania, Geyer and Wilshusen, 1982;

Map 13, Commonwealth of Pennsylvania Department of Conservation and Natural Resources (DCNR), Physiographic Provinces of Pennsylvania, (2000, 1:2,000,000);

Pennsylvania Ground Water Information System (PaGWIS) online database (September 2019);

Pennsylvania's Land Recycling Program, Technical Guidance Manual, 261-0300-101/January 19, 2019;

PADEP Technical Guidance Document: Closure Requirements for Underground Storage Tank Systems, 1 April 1998;

PA Code Title 25, Chapter 250. Administration of Land Recycling Program (ACT 2), amended March 16, 2018, effective March 17, 2018;

PA Land Recycling Program Technical Guidance Manual – Section IV.A.4: Vapor Intrusion into Buildings from Groundwater and Soil under the Act 2 Statewide Health Standard, 19 January 2019

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table I: Soil Samples Laboratory Analytical Results
Observation Well Soil Samples
Dispenser and Line Samples 23 December 1997
SBs 1 through 8 - 3/26/2009
Former Sunoco Station, 2899 Holme Avenue (Duns # 0005-1078)
Philadelphia, PA
All Results are Reported in ug/kg.

Parameter / Sample I.D.	**OW 1**	**OW 2**	**OW 3**	**OW 4**	**Residential Soil Used Aquifer**	**Residential Indoor Air Screening**	**Residential Direct Contact**
Sampling Depth	28-30 ft. bgs	18-20 ft. bgs	28-30 ft. bgs	28-30 ft. bgs			
Benzene	< 5	< 5	< 5	< 5	500	130	57,000
Toluene	< 5	< 5	< 5	< 5	100,000	44,000	10,000,000
Ethylbenzene	< 5	< 5	< 5	< 5	70,000	46,000	10,000,000
Total Xylenes	< 15	< 15	< 15	< 15	1,000,000	990,000	1,900,000
MTBE	< 20	160	< 20	< 20	2,000	280	1,700,000
Naphthalene	< 330	< 330	< 330	< 330	10,000	25,000	160,000

Parameter / Sample I.D.	**Disp-1**	**Disp-2**	**Disp-3**	**Disp-4**	**Residential Soil Used Aquifer**	**Residential Indoor Air Screening**	**Residential Direct Contact**
Sampling Depth	4 ft. bgs	4 ft. bgs	4 ft. bgs	4 ft. bgs			
Benzene	**57,200**	**5,730**	<4	11.9	500	130	57,000
Toluene	**1,360,000**	89,300	11	<8	100,000	44,000	10,000,000
Ethylbenzene	**414,000**	37,500	<8	<8	70,000	46,000	10,000,000
Total Xylenes	**2,960,000**	238,000	<24	<24	1,000,000	990,000	1,900,000
MTBE	**<20,000**	<500	<4	<4	2,000	280	1,700,000
Naphthalene	**193,000**	**37,600**	<4	7.43	10,000	25,000	160,000
Isopropylbenzene	25,500	4,510	<4	<4	84,000	600,000	7,700,000

Parameter / Sample I.D.	**Disp-5**	**Piping-6**	**Piping-7**	**Piping-8**	**Residential Soil Used Aquifer**	**Residential Indoor Air Screening**	**Residential Direct Contact**
Sampling Depth	4 ft. bgs	4 ft. bgs	4 ft. bgs	4 ft. bgs			
Benzene	<4	<4	<4	<4	500	130	57,000
Toluene	29.8	24.4	298	31.6	100,000	44,000	10,000,000
Ethylbenzene	18.4	9.6	<8	<8	70,000	46,000	10,000,000
Total Xylenes	<24	<24	<24	<24	1,000,000	990,000	1,900,000
MTBE	<4	<4	<4	<4	2,000	280	1,700,000
Naphthalene	19.4	9	7.5	5.06	10,000	25,000	160,000
Isopropylbenzene	<4	<4	<4	<4	84,000	600,000	7,700,000

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table I (cont): Soil Samples Laboratory Analytical Results
Observation Well Soil Samples
Dispenser and Line Samples 23 December 1997
SBs 1 through 8 - 3/26/2009
Former Sunoco Station, 2899 Holme Avenue (Duns # 0005-1078)
Philadelphia, PA
All Results are Reported in ug/kg.

Parameter / Sample I.D.	**Disp-9**	**Disp-10**	**Disp-11**	**Disp-12**	**Residential Soil Used Aquifer**	**Residential Indoor Air Screening**	**Residential Direct Contact**
Sampling Depth	4 ft. bgs	4 ft. bgs	4 ft. bgs	4 ft. bgs			
Benzene	<4	<4	<4	<20	500	130	57,000
Toluene	40.6	57.4	<8	684	100,000	44,000	10,000,000
Ethylbenzene	10.6	<8	<8	85.3	70,000	46,000	10,000,000
Total Xylenes	<24	<24	<24	435	1,000,000	990,000	1,900,000
MTBE	<4	<4	<4	<20	2,000	280	1,700,000
Naphthalene	<4	<4	<4	1,950	10,000	25,000	160,000
Isopropylbenzene	<4	<4	<4	80	84,000	600,000	7,700,000

Parameter / Sample I.D.	**SB 1**	**SB 2**	**SB 3**	**SB 4**	**Residential Soil Used Aquifer**	**Residential Indoor Air Screening**	**Residential Direct Contact**
Sampling Depth	7.2 ft. bgs	6.8 ft. bgs	11.7 ft. bgs	5.8 ft. bgs			
Benzene	< 220	**1,200**	< 240	< 240	500	130	57,000
Toluene	< 220	8,100	< 240	< 240	100,000	44,000	10,000,000
Ethylbenzene	< 220	10,000	< 240	< 240	70,000	46,000	10,000,000
Total Xylenes	< 220	74,000	< 240	< 240	1,000,000	990,000	1,900,000
MTBE	< 220	< 220	< 240	< 240	2,000	280	1,700,000
Naphthalene	< 220	5,600	< 240	< 240	10,000	25,000	160,000
Isopropylbenzene	< 220	1,400	< 240	< 240	84,000	600,000	7,700,000

Parameter / Sample I.D.	**SB 5**	**SB 6**	**SB 7**	**SB 8**	**Residential Soil Used Aquifer**	**Residential Indoor Air Screening**	**Residential Direct Contact**
Sampling Depth	8.9 ft. bgs	4.3 ft. bgs	6.6 ft. bgs	10.0 ft. bgs			
Benzene	< 220	< 230	< 220	< 240	500	130	57,000
Toluene	< 220	< 230	< 220	< 240	100,000	44,000	10,000,000
Ethylbenzene	< 220	< 230	< 220	< 240	70,000	46,000	10,000,000
Total Xylenes	< 220	< 230	< 220	< 240	1,000,000	990,000	1,900,000
MTBE	< 220	< 230	< 220	< 240	2,000	280	1,700,000
Naphthalene	< 220	< 230	< 220	< 240	10,000	25,000	160,000
Isopropylbenzene	< 220	< 230	< 220	< 240	84,000	600,000	7,700,000

All results are reported on a dry weight basis.
*The ACT 2 standards listed here are the PADEP Statewide health standard, medium specific concentrations (MSCs) for organic regulated substances in unsaturated soil.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table II: Water Table Elevations
Former Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA
(all measurements are in feet)

OW 1 (Feb 2003-Jan 2009) Total Depth = 40'

Date	DTW	DTP	PT	Casing Elevation	Water Table Elevation	CWTE
13-May-97	33.98			98.81	64.83	64.83
17-Oct-97	35.97			98.81	62.84	62.84
23-Mar-98	37.76			98.81	61.05	61.05
10-Jun-98	36.04			98.81	62.77	62.77
30-Sep-98	36.42			98.81	62.39	62.39
22-Dec-98	38.28			98.81	60.53	60.53
10-Feb-99	37.66			98.81	61.15	61.15
27-Sep-99	38.97			98.81	59.84	59.84
18-Feb-00	33.06			98.81	65.75	65.75
2-Jun-00	36.65			98.81	62.16	62.16
30-Aug-00	36.51			98.81	62.30	62.30
24-Oct-00	36.09			94.56	58.47	58.47
10-Nov-00	35.93			94.56	58.63	58.63
5-Dec-00	36.01			94.56	58.55	58.55
6-Feb-01	36.28			94.56	58.28	58.28
21-Feb-01	36.83			94.62	57.79	57.79
14-Mar-01	36.60			94.62	58.02	58.02
5-Jun-01	35.23			94.62	59.39	59.39
5-Sep-01	35.99			94.62	58.63	58.63
10-Oct-01	36.60			94.62	58.02	58.02
27-Nov-01	37.50			94.62	57.12	57.12
7-Dec-01	37.70			94.62	56.92	56.92
11-Mar-02	39.39			94.62	55.23	55.23
18-Jun-02				OW 1 was reported dry on this date.		
18-Jul-02	39.64			94.62	54.98	54.98
22-Aug-02				OW 1 was reported dry on this date.		
5-Nov-02				OW 1 was reported dry on this date.		
13-Feb-03	38.83			94.62	55.79	55.79
20-Mar-03	38.37			94.62	56.25	56.25
29-Apr-03	37.37			94.62	57.25	57.25
1-May-03	37.32			94.62	57.30	57.30
15-May-03	36.98			94.62	57.64	57.64
5-Jun-03	36.77			94.62	57.85	57.85
1-Jul-03	36.34			94.62	58.28	58.28
7-Aug-03	35.63			94.62	58.99	58.99
30-Sep-03	35.99			94.62	58.63	58.63
31-Oct-03	36.42			94.62	58.20	58.20
19-Nov-03	36.57			94.62	58.05	58.05
23-Dec-03	36.75			94.62	57.87	57.87
30-Jan-04	36.81			94.62	57.81	57.81
5-Feb-04	36.12			94.62	58.50	58.50
29-Mar-04	36.03			94.62	58.59	58.59
27-Apr-04	35.80			94.62	58.82	58.82
11-May-04	35.57			94.62	59.05	59.05
8-Jun-04	35.16			94.62	59.46	59.46
21-Jul-04	35.21			94.62	59.41	59.41
17-Aug-04	35.37			94.62	59.25	59.25
14-Sep-04	35.43			94.62	59.19	59.19
26-Oct-04	35.79			94.62	58.83	58.83
10-Jan-05	36.16			94.62	58.46	58.46
21-Feb-05	35.92			94.62	58.70	58.70
7-Mar-05	35.81			94.62	58.81	58.81
7-Apr-05	35.53			94.62	59.09	59.09
15-Apr-05	35.45			94.62	59.17	59.17
12-May-05	34.91			94.62	59.71	59.71
8-Jun-05	34.94			94.62	59.68	59.68
20-Jul-05	35.31			94.62	59.31	59.31
16-Aug-05	35.74			94.62	58.88	58.88
13-Sep-05	36.13			94.62	58.49	58.49

DTW = Depth to Water; DTP = Depth to Product; PT = Product Thickness
CWTE = Corrected Watertable Elevation

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table II cont.: Water Table Elevations
Former Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA
(all measurements are in feet)

OW 1 (Apr 2009-present) Total Depth = 40'

Date	DTW	DTP	PT	Casing Elevation	Water Table Elevation	CWTE
14-Oct-05	36.71			94.62	57.91	57.91
8-Nov-05	36.97			94.62	57.65	57.65
8-Dec-05	37.22			94.62	57.40	57.40
12-Jan-06	37.47			94.62	57.15	57.15
8-Feb-06	37.36			94.62	57.26	57.26
20-Mar-06	36.82			94.62	57.80	57.80
12-Apr-06	36.76			94.62	57.86	57.86
8-May-06	36.93			94.62	57.69	57.69
7-Jun-06	37.14			94.62	57.48	57.48
13-Jul-06	37.16			94.62	57.46	57.46
25-Sep-06	37.17			94.62	57.45	57.45
4-Oct-06	37.26			94.62	57.36	57.36
10-Jan-07	36.37			94.62	58.25	58.25
23-Apr-07	35.73			94.62	58.89	58.89
3-Jul-07	34.81			94.62	59.81	59.81
30-Oct-07	36.68			94.62	57.94	57.94
7-Jan-08	37.77			94.62	56.85	56.85
1-Apr-08	38.11			94.62	56.51	56.51
2-Jul-08	37.60			94.62	57.02	57.02
13-Oct-08	38.52			94.62	56.10	56.10
13-Jan-09	38.86			94.62	55.76	55.76
7-Apr-09	38.60			94.62	56.02	56.02
9-Jul-09	37.83			94.62	56.79	56.79
30-Oct-09	36.95			94.62	57.67	57.67
27-Jan-10	35.72			94.62	58.90	58.90
6-May-10	32.97			94.62	61.65	61.65
14-Jul-10	33.58			94.62	61.04	61.04
8-Oct-10	34.81			94.62	59.81	59.81
17-Jan-11	35.84			94.62	58.78	58.78
4-Apr-11	35.01			94.62	59.61	59.61
26-Jul-11	34.08			94.62	60.54	60.54
5-Oct-11	32.94			94.62	61.68	61.68
16-Jan-12	33.03			94.62	61.59	61.59
25-Apr-12	33.78			94.62	60.84	60.84
12-Jul-12	34.37			94.62	60.25	60.25
18-Oct-12	34.93			94.62	59.69	59.69
4-Feb-13	35.34			94.62	59.28	59.28
22-Apr-13	34.98			94.62	59.64	59.64
10-Jul-13	34.36			94.62	60.26	60.26
17-Oct-13	34.67			94.62	59.95	59.95
20-Jan-14	35.31			94.62	59.31	59.31
17-Apr-14	33.83			94.62	60.79	60.79
28-Jul-14	33.46			94.62	61.16	61.16
29-Oct-14	34.53			94.62	60.09	60.09
5-Feb-15	34.91			94.62	59.71	59.71
13-Apr-15	33.89			94.62	60.73	60.73
22-Jul-15	33.95			94.62	60.67	60.67
23-Nov-15	35.21			94.62	59.41	59.41
11-Feb-16	34.72			94.62	59.90	59.90
4-May-16	33.96			94.62	60.66	60.66
26-Jul-16	34.09			94.62	60.53	60.53
6-Oct-16	34.82			94.62	59.80	59.80
11-Jan-17	35.25			94.62	59.37	59.37
13-Apr-17	35.13			94.62	59.49	59.49
17-Jul-17	34.63			94.62	59.99	59.99
11-Oct-17	35.46			94.62	59.16	59.16
19-Jan-18	36.56			94.62	58.06	58.06
23-Apr-18	34.84			94.62	59.78	59.78
11-Jul-18	34.11			94.62	60.51	60.51
16-Oct-18	34.30			94.62	60.32	60.32
10-Jan-19	32.97			94.62	61.65	61.65
23-Apr-19	32.85			94.62	61.77	61.77

DTW = Depth to Water; DTP = Depth to Product; PT = Product Thickness
CWTE = Corrected Watertable Elevation

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table II cont.: Water Table Elevations
Former Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA
(all measurements are in feet)

OW 2 (Feb 2003-Jan 2009) Total Depth = 40'

Date	DTW	DTP	PT	Casing Elevation	Water Table Elevation	CWTE
13-May-97	33.31			99.20	65.89	65.89
17-Oct-97	35.29			99.20	63.91	63.91
23-Mar-98	39.08			99.20	60.12	60.12
10-Jun-98	35.51			99.20	63.69	63.69
30-Sep-98	35.83			99.20	63.37	63.37
22-Dec-98	37.71			99.20	61.49	61.49
10-Feb-99	39.27			99.20	59.93	59.93
27-Sep-99	38.46			99.20	60.74	60.74
18-Feb-00	37.75			99.20	61.45	61.45
2-Jun-00	36.18			99.20	63.02	63.02
30-Aug-00	35.95			99.20	63.25	63.25
24-Oct-00	35.57			94.31	58.74	58.74
10-Nov-00	35.43			94.31	58.88	58.88
5-Dec-00	35.46			94.31	58.85	58.85
6-Feb-01	36.81			94.31	57.50	57.50
21-Feb-01	36.28			94.44	58.16	58.16
14-Mar-01	36.07			94.44	58.37	58.37
5-Jun-01	34.64			94.44	59.80	59.80
5-Sep-01	35.38			94.44	59.06	59.06
10-Oct-01	36.01			94.44	58.43	58.43
27-Nov-01	36.90			94.44	57.54	57.54
7-Dec-01	37.11			94.44	57.33	57.33
11-Mar-02				OW 2 was reported dry on this date.		
18-Jun-02	39.45			94.44	54.99	54.99
18-Jul-02	39.37			94.44	55.07	55.07
22-Aug-02				OW 2 was reported dry on this date.		
5-Nov-02				OW 2 was reported dry on this date.		
13-Feb-03	38.46			94.44	55.98	55.98
20-Mar-03	37.95			94.44	56.49	56.49
29-Apr-03	36.99			94.44	57.45	57.45
1-May-03	36.93			94.44	57.51	57.51
15-May-03	36.54			94.44	57.90	57.90
5-Jun-03	36.27			94.44	58.17	58.17
1-Jul-03	35.87			94.44	58.57	58.57
7-Aug-03	35.12			94.44	59.32	59.32
30-Sep-03	35.43			94.44	59.01	59.01
31-Oct-03	35.80			94.44	58.64	58.64
19-Nov-03	35.75			94.44	58.69	58.69
23-Dec-03	36.18			94.44	58.26	58.26
30-Jan-04	36.22			94.44	58.22	58.22
5-Feb-04	35.62			94.44	58.82	58.82
29-Mar-04	35.43			94.44	59.01	59.01
27-Apr-04	35.19			94.44	59.25	59.25
11-May-04	35.03			94.44	59.41	59.41
8-Jun-04	34.58			94.44	59.86	59.86
21-Jul-04	34.67			94.44	59.77	59.77
17-Aug-04	34.77			94.44	59.67	59.67
14-Sep-04	34.86			94.44	59.58	59.58
26-Oct-04	35.16			94.44	59.28	59.28
10-Jan-05	35.52			94.44	58.92	58.92
21-Feb-05	35.28			94.44	59.16	59.16
7-Mar-05	35.25			94.44	59.19	59.19
7-Apr-05	34.95			94.44	59.49	59.49
15-Apr-05	34.97			94.44	59.47	59.47
12-May-05	34.44			94.44	60.00	60.00
8-Jun-05	34.32			94.44	60.12	60.12
20-Jul-05	34.70			94.44	59.74	59.74
16-Aug-05	35.11			94.44	59.33	59.33
13-Sep-05	35.53			94.44	58.91	58.91
14-Oct-05	36.12			94.44	58.32	58.32
8-Nov-05	36.34			94.44	58.10	58.10
8-Dec-05	36.72			94.44	57.72	57.72

DTW = Depth to Water; DTP = Depth to Product; PT = Product Thickness
CWTE = Corrected Watertable Elevation

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table II cont.: Water Table Elevations
Former Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA
(all measurements are in feet)

OW 2 (Apr 2009-present) Total Depth = 40'

Date	DTW	DTP	PT	Casing Elevation	Water Table Elevation	CWTE
12-Jan-06	36.91			94.44	57.53	57.53
8-Feb-06	36.88			94.44	57.56	57.56
20-Mar-06	36.38			94.44	58.06	58.06
12-Apr-06	36.26			94.44	58.18	58.18
8-May-06	36.37			94.44	58.07	58.07
7-Jun-06	36.49			94.44	57.95	57.95
13-Jul-06	36.64			94.44	57.80	57.80
25-Sep-06	36.64			94.44	57.80	57.80
4-Oct-06	36.72			94.44	57.72	57.72
10-Jan-07	35.83			94.44	58.61	58.61
23-Apr-07	35.09			94.44	59.35	59.35
3-Jul-07	34.20			94.44	60.24	60.24
30-Oct-07	36.11			94.44	58.33	58.33
7-Jan-08	37.21			94.44	57.23	57.23
1-Apr-08	37.59			94.44	56.85	56.85
2-Jul-08	37.06			94.44	57.38	57.38
13-Oct-08	38.01			94.44	56.43	56.43
13-Jan-09	38.31			94.44	56.13	56.13
7-Apr-09	38.09			94.44	56.35	56.35
9-Jul-09	37.32			94.44	57.12	57.12
30-Oct-09	36.41			94.44	58.03	58.03
27-Jan-10	35.03			94.44	59.41	59.41
6-May-10	32.39			94.44	62.05	62.05
14-Jul-10	32.94			94.44	61.50	61.50
8-Oct-10	34.34			94.44	60.10	60.10
17-Jan-11	35.46			94.44	58.98	58.98
4-Apr-11	34.78			94.44	59.66	59.66
26-Jul-11	33.61			94.44	60.83	60.83
5-Oct-11	32.39			94.44	62.05	62.05
16-Jan-12	32.39			94.44	62.05	62.05
25-Apr-12	33.27			94.44	61.17	61.17
12-Jul-12	33.92			94.44	60.52	60.52
18-Oct-12	34.57			94.44	59.87	59.87
4-Feb-13	35.08			94.44	59.36	59.36
22-Apr-13	34.71			94.44	59.73	59.73
10-Jul-13	33.99			94.44	60.45	60.45
17-Oct-13	34.32			94.44	60.12	60.12
20-Jan-14	35.08			94.44	59.36	59.36
17-Apr-14	33.43			94.44	61.01	61.01
28-Jul-14	32.98			94.44	61.46	61.46
29-Oct-14	34.13			94.44	60.31	60.31
5-Feb-15	34.57			94.44	59.87	59.87
13-Apr-15	33.40			94.44	61.04	61.04
22-Jul-15	33.48			94.44	60.96	60.96
23-Nov-15	34.89			94.44	59.55	59.55
11-Feb-16	34.61			94.44	59.83	59.83
4-May-16	33.70			94.44	60.74	60.74
26-Jul-16	33.70			94.44	60.74	60.74
6-Oct-16	34.46			94.44	59.98	59.98
11-Jan-17	35.09			94.44	59.35	59.35
13-Apr-17	35.01			94.44	59.43	59.43
17-Jul-17	34.32			94.44	60.12	60.12
11-Oct-17	35.08			94.44	59.36	59.36
19-Jan-18	36.19			94.44	58.25	58.25
23-Apr-18	34.37			94.44	60.07	60.07
11-Jul-18	33.58			94.44	60.86	60.86
16-Oct-18	33.61			94.44	60.83	60.83
10-Jan-19	32.36			94.44	62.08	62.08
23-Apr-19	32.07			94.44	62.37	62.37

DTW = Depth t
CWTE = Corrected Watertable Elevation

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table II cont.: Water Table Elevations
Former Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA
(all measurements are in feet)

OW 3 (Feb 2003-Jan 2009) Total Depth = 40'

Date	DTW	DTP	PT	Casing Elevation	Water Table Elevation	CWTE
13-May-97	32.49			100.00	67.51	67.51
17-Oct-97	34.45			100.00	65.55	65.55
23-Mar-98	37.65			100.00	62.35	62.35
10-Jun-98	34.71			100.00	65.29	65.29
30-Sep-98	35.02			100.00	64.98	64.98
22-Dec-98	36.94			100.00	63.06	63.06
10-Feb-99	38.28			100.00	61.72	61.72
27-Sep-99	37.77			100.00	62.23	62.23
18-Feb-00	35.21			100.00	64.79	64.79
2-Jun-00	35.27			100.00	64.73	64.73
30-Aug-00	35.11			100.00	64.89	64.89
24-Oct-00	34.64			93.42	58.78	58.78
10-Nov-00	34.45			93.42	58.97	58.97
5-Dec-00	34.51			93.42	58.91	58.91
6-Feb-01	35.41			93.42	58.01	58.01
21-Feb-01	35.44			93.54	58.10	58.10
14-Mar-01	35.26			93.54	58.28	58.28
5-Jun-01	33.92			93.54	59.62	59.62
5-Sep-01	35.54			93.54	58.00	58.00
10-Oct-01	35.23			93.54	58.31	58.31
27-Nov-01	36.21			93.54	57.33	57.33
7-Dec-01	36.42			93.54	57.12	57.12
11-Mar-02	38.21			93.54	55.33	55.33
18-Jun-02	38.73			93.54	54.81	54.81
18-Jul-02	38.55			93.54	54.99	54.99
22-Aug-02	38.63			93.54	54.91	54.91
5-Nov-02	38.88			93.54	54.66	54.66
13-Feb-03	37.56			93.54	55.98	55.98
20-Mar-03	37.16			93.54	56.38	56.38
29-Apr-03	36.18			93.54	57.36	57.36
1-May-03	36.14			93.54	57.40	57.40
15-May-03	35.79			93.54	57.75	57.75
5-Jun-03	35.52			93.54	58.02	58.02
1-Jul-03	35.06			93.54	58.48	58.48
7-Aug-03	34.31			93.54	59.23	59.23
30-Sep-03	34.55			93.54	58.99	58.99
31-Oct-03	35.02			93.54	58.52	58.52
19-Nov-03	35.13			93.54	58.41	58.41
23-Dec-03	35.33			93.54	58.21	58.21
30-Jan-04	35.36			93.54	58.18	58.18
5-Feb-04	34.73			93.54	58.81	58.81
29-Mar-04	34.64			93.54	58.90	58.90
27-Apr-04	34.39			93.54	59.15	59.15
11-May-04	34.20			93.54	59.34	59.34
8-Jun-04	33.71			93.54	59.83	59.83
21-Jul-04	33.65			93.54	59.89	59.89
17-Aug-04	33.66			93.54	59.88	59.88
14-Sep-04	33.70			93.54	59.84	59.84
26-Oct-04	34.18			93.54	59.36	59.36
10-Jan-05	34.70			93.54	58.84	58.84
21-Feb-05	34.53			93.54	59.01	59.01
7-Mar-05	34.42			93.54	59.12	59.12
7-Apr-05	34.16			93.54	59.38	59.38
15-Apr-05	34.15			93.54	59.39	59.39
12-May-05	33.57			93.54	59.97	59.97
8-Jun-05	33.40			93.54	60.14	60.14
20-Jul-05	33.78			93.54	59.76	59.76
16-Aug-05	34.23			93.54	59.31	59.31
13-Sep-05	34.63			93.54	58.91	58.91
14-Oct-05	35.29			93.54	58.25	58.25
8-Nov-05	35.53			93.54	58.01	58.01

DTW = Depth to Water; DTP = Depth to Product; PT = Product Thickness
CWTE = Corrected Watertable Elevation

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table II cont.: Water Table Elevations
Former Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA
(all measurements are in feet)

OW 3 (Apr 2009-present) Total Depth = 40'

Date	DTW	DTP	PT	Casing Elevation	Water Table Elevation	CWTE
8-Dec-05	35.93			93.54	57.61	57.61
12-Jan-06	36.13			93.54	57.41	57.41
8-Feb-06	36.11			93.54	57.43	57.43
20-Mar-06	35.67			93.54	57.87	57.87
12-Apr-06	35.61			93.54	57.93	57.93
8-May-06	35.77			93.54	57.77	57.77
7-Jun-06	35.87			93.54	57.67	57.67
13-Jul-06	35.89			93.54	57.65	57.65
25-Sep-06	35.89			93.54	57.65	57.65
4-Oct-06	35.92			93.54	57.62	57.62
10-Jan-07	35.14			93.54	58.40	58.40
23-Apr-07	34.60			93.54	58.94	58.94
3-Jul-07	33.30			93.54	60.24	60.24
30-Oct-07	35.25			93.54	58.29	58.29
7-Jan-08	36.43			93.54	57.11	57.11
1-Apr-08	36.85			93.54	56.69	56.69
2-Jul-08	36.35			93.54	57.19	57.19
13-Oct-08	37.27			93.54	56.27	56.27
13-Jan-09	37.69			93.54	55.85	55.85
7-Apr-09	37.47			93.54	56.07	56.07
9-Jul-09	36.48			93.54	57.06	57.06
30-Oct-09	35.57			93.54	57.97	57.97
27-Jan-10	34.37			93.54	59.17	59.17
6-May-10	30.67			93.54	62.87	62.87
14-Jul-10	30.77			93.54	62.77	62.77
8-Oct-10	32.14			93.54	61.40	61.40
17-Jan-11	33.18			93.54	60.36	60.36
4-Apr-11	32.31			93.54	61.23	61.23
26-Jul-11	31.28			93.54	62.26	62.26
5-Oct-11	30.07			93.54	63.47	63.47
16-Jan-12	30.29			93.54	63.25	63.25
25-Apr-12	31.11			93.54	62.43	62.43
12-Jul-12	31.74			93.54	61.80	61.80
18-Oct-12	32.31			93.54	61.23	61.23
4-Feb-13	32.78			93.54	60.76	60.76
22-Apr-13	32.42			93.54	61.12	61.12
10-Jul-13	31.75			93.54	61.79	61.79
17-Oct-13	32.11			93.54	61.43	61.43
20-Jan-14	32.71			93.54	60.83	60.83
17-Apr-14	31.22			93.54	62.32	62.32
28-Jul-14	30.83			93.54	62.71	62.71
29-Oct-14	32.09			93.54	61.45	61.45
5-Feb-15	32.33			93.54	61.21	61.21
13-Apr-15	31.25			93.54	62.29	62.29
22-Jul-15	31.37			93.54	62.17	62.17
23-Nov-15	32.75			93.54	60.79	60.79
11-Feb-16	32.48			93.54	61.06	61.06
4-May-16	31.66			93.54	61.88	61.88
26-Jul-16	31.68			93.54	61.86	61.86
6-Oct-16	32.44			93.54	61.10	61.10
11-Jan-17	33.01			93.54	60.53	60.53
13-Apr-17	32.86			93.54	60.68	60.68
17-Jul-17	32.73			93.54	60.81	60.81
11-Oct-17	33.81			93.54	59.73	59.73
19-Jan-18	35.22			93.54	58.32	58.32
23-Apr-18	33.69			93.54	59.85	59.85
11-Jul-18	32.81			93.54	60.73	60.73
16-Oct-18	32.95			93.54	60.59	60.59
10-Jan-19	31.64			93.54	61.90	61.90
23-Apr-19	31.19			93.54	62.35	62.35

DTW = Depth to Water; DTP = Depth to Product; PT = Product Thickness
CWTE = Corrected Watertable Elevation

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table II cont.: Water Table Elevations
Former Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA
(all measurements are in feet)

OW 4 (Feb 2003-Jan 2009) Total Depth = 40'

Date	DTW	DTP	PT	Casing Elevation	Water Table Elevation	CWTE
13-May-97	34.25			98.47	64.22	64.22
17-Oct-97	36.19			98.47	62.28	62.28
23-Mar-98	37.96			98.47	60.51	60.51
10-Jun-98	36.42			98.47	62.05	62.05
30-Sep-98	36.74			98.47	61.73	61.73
22-Dec-98	38.58			98.47	59.89	59.89
10-Feb-99	38.85			98.47	59.62	59.62
27-Sep-99	39.39			98.47	59.08	59.08
18-Feb-00	34.18			98.47	64.29	64.29
2-Jun-00	36.99			98.47	61.48	61.48
30-Aug-00	36.79			98.47	61.68	61.68
24-Oct-00	36.37			95.01	58.64	58.64
10-Nov-00	36.19			95.01	58.82	58.82
5-Dec-00	36.26			95.01	58.75	58.75
6-Feb-01	37.13			95.01	57.88	57.88
21-Feb-01	37.16			95.09	57.93	57.93
14-Mar-01	36.97			95.09	58.12	58.12
5-Jun-01	35.63			95.09	59.46	59.46
5-Sep-01	36.25			95.09	58.84	58.84
10-Oct-01				95.09		0.00
27-Nov-01	37.87			95.09	57.22	57.22
7-Dec-01	38.07			95.09	57.02	57.02
11-Mar-02				OW 4 was reported dry on this date.		
18-Jun-02				OW 4 was reported dry on this date.		
18-Jul-02				OW 4 was reported dry on this date.		
22-Aug-02				OW 4 was reported dry on this date.		
5-Nov-02				OW 4 was reported dry on this date.		
13-Feb-03	38.24			95.09	56.85	56.85
20-Mar-03	38.78			95.09	56.31	56.31
29-Apr-03	37.79			95.09	57.30	57.30
1-May-03	37.79			95.09	57.30	57.30
15-May-03	37.45			95.09	57.64	57.64
5-Jun-03	37.18			95.09	57.91	57.91
1-Jul-03	34.71			95.09	60.38	60.38
7-Aug-03	36.00			95.09	59.09	59.09
30-Sep-03	36.28			95.09	58.81	58.81
31-Oct-03	36.73			95.09	58.36	58.36
19-Nov-03	36.83			95.09	58.26	58.26
23-Dec-03	Car broke down over OW 4					
30-Jan-04	36.73			95.09	58.36	58.36
5-Feb-04	36.43			95.09	58.66	58.66
29-Mar-04	36.31			95.09	58.78	58.78
27-Apr-04	36.09			95.09	59.00	59.00
11-May-04	35.91			95.09	59.18	59.18
8-Jun-04	35.43			95.09	59.66	59.66
21-Jul-04	35.42			95.09	59.67	59.67
17-Aug-04	35.47			95.09	59.62	59.62
14-Sep-04	35.52			95.09	59.57	59.57
26-Oct-04	35.95			95.09	59.14	59.14
10-Jan-05	36.43			95.09	58.66	58.66
21-Feb-05	36.21			95.09	58.88	58.88
7-Mar-05	36.12			95.09	58.97	58.97
7-Apr-05	35.83			95.09	59.26	59.26
15-Apr-05	35.83			95.09	59.26	59.26
12-May-05	35.27			95.09	59.82	59.82
8-Jun-05	35.47			95.09	59.62	59.62
20-Jul-05	35.54			95.09	59.55	59.55
16-Aug-05	35.94			95.09	59.15	59.15
13-Sep-05	36.33			95.09	58.76	58.76
14-Oct-05	36.99			95.09	58.10	58.10
8-Nov-05	37.23			95.09	57.86	57.86

DTW = Depth to Water; DTP = Depth to Product; PT = Product Thickness
CWTE = Corrected Watertable Elevation

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table II cont.: Water Table Elevations
Former Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA
(all measurements are in feet)

OW 4 (Apr 2009-present) Total Depth = 40'

Date	DTW	DTP	PT	Casing Elevation	Water Table Elevation	CWTE
8-Dec-05	37.59			95.09	57.50	57.50
12-Jan-06	37.81			95.09	57.28	57.28
8-Feb-06	37.75			95.09	57.34	57.34
20-Mar-06	37.30			95.09	57.79	57.79
12-Apr-06	37.25			95.09	57.84	57.84
8-May-06	37.38			95.09	57.71	57.71
7-Jun-06	37.52			95.09	57.57	57.57
13-Jul-06	37.55			95.09	57.54	57.54
25-Sep-06	37.53			95.09	57.56	57.56
4-Oct-06	37.59			95.09	57.50	57.50
10-Jan-07	36.82			95.09	58.27	58.27
23-Apr-07	36.25			95.09	58.84	58.84
3-Jul-07	35.03			95.09	60.06	60.06
30-Oct-07	36.95			95.09	58.14	58.14
7-Jan-08	38.11			95.09	56.98	56.98
1-Apr-08	38.50			95.09	56.59	56.59
2-Jul-08	38.01			95.09	57.08	57.08
13-Oct-08	38.91			95.09	56.18	56.18
13-Jan-09	39.30			95.09	55.79	55.79
7-Apr-09	39.08			95.09	56.01	56.01
9-Jul-09	38.20			95.09	56.89	56.89
30-Oct-09	37.27			95.09	57.82	57.82
27-Jan-10	36.07			95.09	59.02	59.02
6-May-10	32.66			95.09	62.43	62.43
14-Jul-10	32.88			95.09	62.21	62.21
8-Oct-10	34.23			95.09	60.86	60.86
17-Jan-11	35.27			95.09	59.82	59.82
4-Apr-11	34.43			95.09	60.66	60.66
26-Jul-11	33.40			95.09	61.69	61.69
5-Oct-11	32.21			95.09	62.88	62.88
16-Jan-12	32.38			95.09	62.71	62.71
25-Apr-12	33.19			95.09	61.90	61.90
12-Jul-12	33.82			95.09	61.27	61.27
18-Oct-12	34.38			95.09	60.71	60.71
4-Feb-13	34.86			95.09	60.23	60.23
22-Apr-13	34.48			95.09	60.61	60.61
10-Jul-13	33.82			95.09	61.27	61.27
17-Oct-13	34.15			95.09	60.94	60.94
20-Jan-14	34.78			95.09	60.31	60.31
17-Apr-14	33.29			95.09	61.80	61.80
28-Jul-14	32.87			95.09	62.22	62.22
29-Oct-14	34.05			95.09	61.04	61.04
5-Feb-15	34.38			95.09	60.71	60.71
13-Apr-15	33.31			95.09	61.78	61.78
22-Jul-15	33.41			95.09	61.68	61.68
23-Nov-15	34.77			95.09	60.32	60.32
11-Feb-16	34.45			95.09	60.64	60.64
4-May-16	33.60			95.09	61.49	61.49
26-Jul-16	33.64			95.09	61.45	61.45
6-Oct-16	34.40			95.09	60.69	60.69
11-Jan-17	34.94			95.09	60.15	60.15
13-Apr-17	34.79			95.09	60.30	60.30
17-Jul-17	34.56			95.09	60.53	60.53
11-Oct-17	35.56			95.09	59.53	59.53
19-Jan-18	36.86			95.09	58.23	58.23
23-Apr-18	35.31			95.09	59.78	59.78
11-Jul-18	34.46			95.09	60.63	60.63
16-Oct-18	34.62			95.09	60.47	60.47
10-Jan-19	33.32			95.09	61.77	61.77
23-Apr-19	32.91			95.09	62.18	62.18

DTW = Depth to Water; DTP = Depth to Product; PT = Product Thickness
CWTE = Corrected Watertable Elevation

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table II cont.: Water Table Elevations
Former Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA
(all measurements are in feet)

OW 5 (Feb 2003-Jan 2009) Total Depth = 50'

Date	DTW	DTP	PT	Casing Elevation	Water Table Elevation	CWTE
24-Oct-00	35.19			93.75	58.56	58.56
10-Nov-00	35.02			93.75	58.73	58.73
5-Dec-00	35.22			93.75	58.53	58.53
6-Feb-01	35.96			93.75	57.79	57.79
21-Feb-01	35.96			93.76	57.80	57.80
14-Mar-01	35.71			93.76	58.05	58.05
5-Jun-01	34.35			93.76	59.41	59.41
5-Sep-01	35.16			93.76	58.60	58.60
10-Oct-01	35.75			93.76	58.01	58.01
27-Nov-01	36.62			93.76	57.14	57.14
7-Dec-01	36.82			93.76	56.94	56.94
11-Mar-02	38.48			93.76	55.28	55.28
18-Jun-02	39.20			93.76	54.56	54.56
18-Jul-02	39.00			93.76	54.76	54.76
22-Aug-02	39.08			93.76	54.68	54.68
5-Nov-02	39.30			93.76	54.46	54.46
13-Feb-03	38.06	38.05	0.01	93.76	55.70	55.71
20-Mar-03	37.54	37.53	0.01	93.76	56.22	56.23
29-Apr-03	36.55			93.76	57.21	57.21
1-May-03	36.53			93.76	57.23	57.23
15-May-03	36.16			93.76	57.60	57.60
5-Jun-03	35.91			93.76	57.85	57.85
1-Jul-03	35.49			93.76	58.27	58.27
7-Aug-03	34.80			93.76	58.96	58.96
30-Sep-03	35.16			93.76	58.60	58.60
31-Oct-03	35.58			93.76	58.18	58.18
19-Nov-03	35.80			93.76	57.96	57.96
23-Dec-03	35.88			93.76	57.88	57.88
30-Jan-04	35.92			93.76	57.84	57.84
5-Feb-04	35.31			93.76	58.45	58.45
29-Mar-04	35.23			93.76	58.53	58.53
27-Apr-04	34.95			93.76	58.81	58.81
11-May-04	34.73			93.76	59.03	59.03
8-Jun-04	34.38			93.76	59.38	59.38
21-Jul-04	34.40			93.76	59.36	59.36
17-Aug-04	34.65			93.76	59.11	59.11
14-Sep-04	34.68			93.76	59.08	59.08
26-Oct-04	35.06			93.76	58.70	58.70
10-Jan-05	35.21			93.76	58.55	58.55
21-Feb-05	35.06			93.76	58.70	58.70
7-Mar-05	34.96			93.76	58.80	58.80
7-Apr-05	34.67			93.76	59.09	59.09
15-Apr-05	34.58			93.76	59.18	59.18
12-May-05	34.12			93.76	59.64	59.64
8-Jun-05	34.12			93.76	59.64	59.64
20-Jul-05	34.42			93.76	59.34	59.34
16-Aug-05	35.00			93.76	58.76	58.76
13-Sep-05	35.43			93.76	58.33	58.33
14-Oct-05	35.96			93.76	57.80	57.80
8-Nov-05	36.16			93.76	57.60	57.60

DTW = Depth to Water; DTP = Depth to Product; PT = Product Thickness
CWTE = Corrected Watertable Elevation

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table II cont.: Water Table Elevations
Former Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA
(all measurements are in feet)

OW 5 (Apr 2009-present) Total Depth = 50'

Date	DTW	DTP	PT	Casing Elevation	Water Table Elevation	CWTE
8-Dec-05	36.47			93.76	57.29	57.29
12-Jan-06	36.61			93.76	57.15	57.15
8-Feb-06	36.48			93.76	57.28	57.28
20-Mar-06	35.97			93.76	57.79	57.79
12-Apr-06	35.81			93.76	57.95	57.95
8-May-06	35.99			93.76	57.77	57.77
7-Jun-06	36.13			93.76	57.63	57.63
13-Jul-06	36.25			93.76	57.51	57.51
25-Sep-06	36.32			93.76	57.44	57.44
4-Oct-06	36.41			93.76	57.35	57.35
10-Jan-07	35.42			93.76	58.34	58.34
23-Apr-07	34.72			93.76	59.04	59.04
3-Jul-07	34.01			93.76	59.75	59.75
30-Oct-07	35.84			93.76	57.92	57.92
7-Jan-08	36.89			93.76	56.87	56.87
1-Apr-08	37.23			93.76	56.53	56.53
2-Jul-08	36.72			93.76	57.04	57.04
13-Oct-08	37.66			93.76	56.10	56.10
13-Jan-09	37.92			93.76	55.84	55.84
7-Apr-09	37.67			93.76	56.09	56.09
9-Jul-09	36.93			93.76	56.83	56.83
30-Oct-09	36.07			93.76	57.69	57.69
27-Jan-10	34.69			93.76	59.07	59.07
6-May-10	32.37			93.76	61.39	61.39
14-Jul-10	33.19			93.76	60.57	60.57
8-Oct-10	34.46			93.76	59.30	59.30
17-Jan-11	35.50			93.76	58.26	58.26
4-Apr-11	34.80			93.76	58.96	58.96
26-Jul-11	33.78			93.76	59.98	59.98
5-Oct-11	32.53			93.76	61.23	61.23
16-Jan-12	32.58			93.76	61.18	61.18
25-Apr-12	33.35			93.76	60.41	60.41
12-Jul-12	34.02			93.76	59.74	59.74
18-Oct-12	34.71			93.76	59.05	59.05
4-Feb-13	35.02			93.76	58.74	58.74
22-Apr-13	34.75			93.76	59.01	59.01
10-Jul-13	34.04			93.76	59.72	59.72
17-Oct-13	34.36			93.76	59.40	59.40
20-Jan-14	35.06			93.76	58.70	58.70
17-Apr-14	33.45			93.76	60.31	60.31
28-Jul-14	33.03			93.76	60.73	60.73
29-Oct-14	34.17			93.76	59.59	59.59
5-Feb-15	34.57			93.76	59.19	59.19
13-Apr-15	33.53			93.76	60.23	60.23
22-Jul-15	33.56			93.76	60.20	60.20
23-Nov-15	34.89			93.76	58.87	58.87
11-Feb-16	34.43			93.76	59.33	59.33
4-May-16	33.69			93.76	60.07	60.07
26-Jul-16	33.72			93.76	60.04	60.04
6-Oct-16	34.49			93.76	59.27	59.27
11-Jan-17	34.94			93.76	58.82	58.82
13-Apr-17	34.81			93.76	58.95	58.95
17-Jul-17	34.15			93.76	59.61	59.61
11-Oct-17	34.88			93.76	58.88	58.88
19-Jan-18	35.82			93.76	57.94	57.94
23-Apr-18	33.91			93.76	59.85	59.85
11-Jul-18	33.28			93.76	60.48	60.48
16-Oct-18	33.38			93.76	60.38	60.38
10-Jan-19	32.11			93.76	61.65	61.65
23-Apr-19	32.05			93.76	61.71	61.71

DTW = Depth to Water; DTP = Depth to Product; PT = Product Thickness
CWTE = Corrected Watertable Elevation

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table II cont.: Water Table Elevations
Former Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA
(all measurements are in feet)

OW 6 (Feb 2003-Jan 2009) Total Depth = 50'

Date	DTW	DTP	PT	Casing Elevation	Water Table Elevation	CWTE
24-Oct-00	35.29			93.89	58.60	58.60
10-Nov-00	35.15			93.89	58.74	58.74
5-Dec-00	35.05			93.89	58.84	58.84
6-Feb-01	35.87			93.89	58.02	58.02
21-Feb-01	35.89			94.03	58.14	58.14
14-Mar-01	35.69			94.03	58.34	58.34
5-Jun-01	34.26			94.03	59.77	59.77
5-Sep-01	34.99			94.03	59.04	59.04
10-Oct-01	35.59			94.03	58.44	58.44
27-Nov-01	36.52			94.03	57.51	57.51
7-Dec-01	36.72			94.03	57.31	57.31
11-Mar-02	38.47			94.03	55.56	55.56
18-Jun-02	39.10			94.03	54.93	54.93
18-Jul-02	39.00			94.03	55.03	55.03
22-Aug-02	39.07			94.03	54.96	54.96
5-Nov-02	39.29			94.03	54.74	54.74
13-Feb-03	38.09			94.03	55.94	55.94
20-Mar-03	37.61			94.03	56.42	56.42
29-Apr-03	36.73			94.03	57.30	57.30
1-May-03	36.57			94.03	57.46	57.46
15-May-03	36.54			94.03	57.49	57.49
5-Jun-03	36.10			94.03	57.93	57.93
1-Jul-03	35.47			94.03	58.56	58.56
7-Aug-03	35.11			94.03	58.92	58.92
30-Sep-03	35.26			94.03	58.77	58.77
31-Oct-03	35.90			94.03	58.13	58.13
19-Nov-03	36.04			94.03	57.99	57.99
23-Dec-03	35.78			94.03	58.25	58.25
30-Jan-04	35.81			94.03	58.22	58.22
5-Feb-04	35.17			94.03	58.86	58.86
29-Mar-04	35.11			94.03	58.92	58.92
27-Apr-04	34.96			94.03	59.07	59.07
11-May-04	34.74			94.03	59.29	59.29
8-Jun-04	33.87			94.03	60.16	60.16
21-Jul-04	34.21			94.03	59.82	59.82
17-Aug-04	34.40			94.03	59.63	59.63
14-Sep-04	34.58			94.03	59.45	59.45
26-Oct-04	34.94			94.03	59.09	59.09
10-Jan-05	35.14			94.03	58.89	58.89
21-Feb-05	34.67			94.03	59.36	59.36
7-Mar-05	34.90			94.03	59.13	59.13
7-Apr-05	34.66			94.03	59.37	59.37
15-Apr-05	34.63			94.03	59.40	59.40
12-May-05	34.13			94.03	59.90	59.90
8-Jun-05	33.97			94.03	60.06	60.06
20-Jul-05	34.34			94.03	59.69	59.69
16-Aug-05	34.63			94.03	59.40	59.40
13-Sep-05	35.18			94.03	58.85	58.85
14-Oct-05	35.73			94.03	58.30	58.30
8-Nov-05	35.99			94.03	58.04	58.04

DTW = Depth to Water; DTP = Depth to Product; PT = Product Thickness
CWTE = Corrected Watertable Elevation

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table II cont.: Water Table Elevations
Former Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA
(all measurements are in feet)

OW 6 (Apr 2009-present) Total Depth = 50'

Date	DTW	DTP	PT	Casing Elevation	Water Table Elevation	CWTE
8-Dec-05	36.25			94.03	57.78	57.78
12-Jan-06	36.52			94.03	57.51	57.51
8-Feb-06	36.54			94.03	57.49	57.49
20-Mar-06	36.04			94.03	57.99	57.99
12-Apr-06	35.97			94.03	58.06	58.06
8-May-06	35.91			94.03	58.12	58.12
7-Jun-06	35.84			94.03	58.19	58.19
13-Jul-06	36.24			94.03	57.79	57.79
25-Sep-06	36.24			94.03	57.79	57.79
4-Oct-06	36.34			94.03	57.69	57.69
10-Jan-07	35.49			94.03	58.54	58.54
23-Apr-07	34.78			94.03	59.25	59.25
3-Jul-07	33.78			94.03	60.25	60.25
30-Oct-07	35.70			94.03	58.33	58.33
7-Jan-08	36.82			94.03	57.21	57.21
1-Apr-08	37.21			94.03	56.82	56.82
2-Jul-08	36.68			94.03	57.35	57.35
13-Oct-08	37.63			94.03	56.40	56.40
13-Jan-09	37.93			94.03	56.10	56.10
7-Apr-09	37.73			94.03	56.30	56.30
9-Jul-09	36.94			94.03	57.09	57.09
30-Oct-09	36.03			94.03	58.00	58.00
27-Jan-10	34.62			94.03	59.41	59.41
6-May-10	31.94			94.03	62.09	62.09
14-Jul-10	32.44			94.03	61.59	61.59
8-Oct-10	33.84			94.03	60.19	60.19
17-Jan-11	34.98			94.03	59.05	59.05
4-Apr-11	34.31			94.03	59.72	59.72
26-Jul-11	33.32			94.03	60.71	60.71
5-Oct-11	31.98			94.03	62.05	62.05
16-Jan-12	32.15			94.03	61.88	61.88
25-Apr-12	32.83			94.03	61.20	61.20
12-Jul-12	33.48			94.03	60.55	60.55
18-Oct-12	34.13			94.03	59.90	59.90
4-Feb-13	34.73			94.03	59.30	59.30
22-Apr-13	34.27			94.03	59.76	59.76
10-Jul-13	33.54			94.03	60.49	60.49
17-Oct-13	33.83			94.03	60.20	60.20
20-Jan-14	34.60			94.03	59.43	59.43
17-Apr-14	32.99			94.03	61.04	61.04
28-Jul-14	32.37			94.03	61.66	61.66
29-Oct-14	33.66			94.03	60.37	60.37
5-Feb-15	34.13			94.03	59.90	59.90
13-Apr-15	32.95			94.03	61.08	61.08
22-Jul-15	33.02			94.03	61.01	61.01
23-Nov-15	34.43			94.03	59.60	59.60
11-Feb-16	34.23			94.03	59.80	59.80
4-May-16	33.26			94.03	60.77	60.77
26-Jul-16	33.41			94.03	60.62	60.62
6-Oct-16	34.02			94.03	60.01	60.01
11-Jan-17	34.66			94.03	59.37	59.37
13-Apr-17	34.59			94.03	59.44	59.44
17-Jul-17	33.89			94.03	60.14	60.14
11-Oct-17	34.69			94.03	59.34	59.34
19-Jan-18	37.81			94.03	56.22	56.22
23-Apr-18	34.11			94.03	59.92	59.92
11-Jul-18	33.21			94.03	60.82	60.82
16-Oct-18	33.23			94.03	60.80	60.80
10-Jan-19	31.97			94.03	62.06	62.06
23-Apr-19	31.63			94.03	62.40	62.40

DTW = Depth to Water; DTP = Depth to Product; PT = Product Thickness
CWTE = Corrected Watertable Elevation

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table II cont.: Water Table Elevations
Former Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA
(all measurements are in feet)

OW 7 Total Depth = 50'

Date	DTW	DTP	PT	Casing Elevation	Water Table Elevation	CWTE
7-Apr-09	37.91			93.85	55.94	55.94
9-Jul-09	37.15			93.85	56.70	56.70
30-Oct-09	36.28			93.85	57.57	57.57
27-Jan-10	34.94			93.85	58.91	58.91
6-May-10	32.25			93.85	61.60	61.60
14-Jul-10	32.85			93.85	61.00	61.00
8-Oct-10	34.12			93.85	59.73	59.73
17-Jan-11	35.15			93.85	58.70	58.70
4-Apr-11	34.32			93.85	59.53	59.53
26-Jul-11	33.36			93.85	60.49	60.49
5-Oct-11	32.22			93.85	61.63	61.63
16-Jan-12	32.31			93.85	61.54	61.54
25-Apr-12	33.05			93.85	60.80	60.80
12-Jul-12	33.64			93.85	60.21	60.21
18-Oct-12	34.21			93.85	59.64	59.64
4-Feb-13	34.63			93.85	59.22	59.22
22-Apr-13	34.25			93.85	59.60	59.60
10-Jul-13	33.65			93.85	60.20	60.20
17-Oct-13	33.98			93.85	59.87	59.87
20-Jan-14	34.64			93.85	59.21	59.21
17-Apr-14	33.08			93.85	60.77	60.77
28-Jul-14	32.73			93.85	61.12	61.12
29-Oct-14	33.86			93.85	59.99	59.99
5-Feb-15	34.18			93.85	59.67	59.67
13-Apr-15	33.11			93.85	60.74	60.74
22-Jul-15	33.24			93.85	60.61	60.61
23-Nov-15	34.58			93.85	59.27	59.27
11-Feb-16	33.99			93.85	59.86	59.86
4-May-16	33.21			93.85	60.64	60.64
26-Jul-16	33.33			93.85	60.52	60.52
6-Oct-16	34.08			93.85	59.77	59.77
11-Jan-17	34.49			93.85	59.36	59.36
13-Apr-17	34.32			93.85	59.53	59.53
17-Jul-17	33.90			93.85	59.95	59.95
11-Oct-17	34.74			93.85	59.11	59.11
19-Jan-18	35.77			93.85	58.08	58.08
23-Apr-18	33.98			93.85	59.87	59.87
11-Jul-18	33.41			93.85	60.44	60.44
16-Oct-18	33.58			93.85	60.27	60.27
10-Jan-19	32.26			93.85	61.59	61.59
23-Apr-19	32.12			93.85	61.73	61.73

DTW = Depth to Water; DTP = Depth to Product; PT = Product Thickness
CWTE = Corrected Watertable Elevation

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table II cont.: Water Table Elevations
Former Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA
(all measurements are in feet)

OW 8 Total Depth = 50'

Date	DTW	DTP	PT	Casing Elevation	Water Table Elevation	CWTE
7-Apr-09	37.33			93.45	56.12	56.12
9-Jul-09	36.60			93.45	56.85	56.85
30-Oct-09	35.73			93.45	57.72	57.72
27-Jan-10	34.36			93.45	59.09	59.09
6-May-10	32.07			93.45	61.38	61.38
14-Jul-10	32.89			93.45	60.56	60.56
8-Oct-10	34.15			93.45	59.30	59.30
17-Jan-11	35.19			93.45	58.26	58.26
4-Apr-11	34.48			93.45	58.97	58.97
26-Jul-11	33.45			93.45	60.00	60.00
5-Oct-11	32.20			93.45	61.25	61.25
16-Jan-12	32.23			93.45	61.22	61.22
25-Apr-12	33.02			93.45	60.43	60.43
12-Jul-12	33.67			93.45	59.78	59.78
18-Oct-12	34.31			93.45	59.14	59.14
4-Feb-13	34.70			93.45	58.75	58.75
22-Apr-13	34.32			93.45	59.13	59.13
10-Jul-13	33.74			93.45	59.71	59.71
17-Oct-13	34.06			93.45	59.39	59.39
20-Jan-14	34.75			93.45	58.70	58.70
17-Apr-14	33.13			93.45	60.32	60.32
28-Jul-14	32.71			93.45	60.74	60.74
29-Oct-14	33.89			93.45	59.56	59.56
5-Feb-15	34.28			93.45	59.17	59.17
13-Apr-15	33.23			93.45	60.22	60.22
22-Jul-15	33.26			93.45	60.19	60.19
23-Nov-15	34.59			93.45	58.86	58.86
11-Feb-16	34.03			93.45	59.42	59.42
4-May-16	33.26			93.45	60.19	60.19
26-Jul-16	33.36			93.45	60.09	60.09
6-Oct-16	34.11			93.45	59.34	59.34
11-Jan-17	34.57			93.45	58.88	58.88
13-Apr-17	34.43			93.45	59.02	59.02
17-Jul-17	33.79			93.45	59.66	59.66
11-Oct-17	34.54			93.45	58.91	58.91
19-Jan-18	35.45			93.45	58.00	58.00
23-Apr-18	33.55			93.45	59.90	59.90
11-Jul-18	32.96			93.45	60.49	60.49
16-Oct-18	33.08			93.45	60.37	60.37
10-Jan-19	31.79			93.45	61.66	61.66
23-Apr-19	31.69			93.45	61.76	61.76

DTW = Depth to Water; DTP = Depth to Product; PT = Product Thickness
CWTE = Corrected Watertable Elevation

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table III: Historic Dissolved Volatile Organics

Former Sunoco Service Station (DUNS # 0005-1078), 2899 Holme Avenue, Philadelphia, PA

(BTEX, MTBE, Naphthalene, Cumene (Isopropylbenzene) and TBA in ug/l)

OW 1 (May 1997-January 2009)

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Cumene	TBA
13-May-97	1100	1700	880	10000	13680	810	770	-	-
17-Oct-97	950	580	650	9800	11980	400	1300	-	-
23-Mar-98	800	280	610	10000	11690	1200	1200	-	-
10-Jun-98	580	310	650	8800	10340	990	1400	94	-
30-Sep-98	470	190	230	11000	11890	170	1400	110	-
22-Dec-98	540	230	330	12000	13100	200	1100	110	-
10-Feb-99	730	140	470	10000	11340	1800	1400	130	-
27-Sep-99	490	310	1400	15000	17200	450	1500	670	-
18-Feb-00	300	63	270	12000	12633	160	2100	170	-
2-Jun-00	310	85	330	5200	5925	260	17	220	-
30-Aug-00	160	<100	180	11000	11340	<100	1700	130	-
10-Nov-00	200	<100	200	12000	12400	<100	1300	120	-
21-Feb-01	120	69	97	8800	9086	24	1300	100	-
5-Jun-01	120	47	120	9000	9287	18	1200	94	-
5-Sep-01	110	<25	170	5500	5780	<25	1200	130	-
7-Dec-01	87	38	100	6900	7125	18	1400	110	-
11-Mar-02	Not sampled due to insufficient water column.								
18-Jun-02	Not sampled due to insufficient water column.								
22-Aug-02	Not sampled due to insufficient water column.								
5-Nov-02	Not sampled, well was dry at 40 feet.								
13-Feb-03	Not sampled due to insufficient water column.								
15-May-03	46	47	170	8600	8863	<5	3400	110	<80
7-Aug-03	11	40	110	5300	5461	<10	1300	90	<160
19-Nov-03	<25	<25	45	2200	2245	<25	940	45	BDL
5-Feb-04	<50	<50	77	3400	3477	<50	1700	110	BDL of 800
11-May-04	12 J	11 J	84	3000	3107	19 J	1000	95	BDL of 100
21-Jul-04	8 J	2 J	5 J	300	315	5 J	110	18	22 J
26-Oct-04	42	4	28	810	884	21	440	32	53
10-Jan-05	9	3 J	21	570	603	4 J	290	29	41 J
15-Apr-05	22	9	42	1600	1673	26	680	77	47 J
20-Jul-05	7 J	BDL	19 J	900	926	24 J	380	47 J	BDL of 100
14-Oct-05	7	2 J	9	490	508	4 J	330	35	28 J
12-Jan-06	8 J	3 J	32	1600	1643	37	530	77	43 J
12-Apr-06	41 J	BDL "0.7"	46 J	1800	1887	55	620	74	BDL of 100
13-Jul-06	18	BDL "0.7"	34	1300	1352	29	590	66	72 J
4-Oct-06	14 J	BDL "3.0"	36	1400	1450	26	620	72	51 J
10-Jan-07	20	1	57	1700	1778	32	690	110	79
23-Apr-07	18	1	56	1300	1375	62	610	100	51
3-Jul-07	<1	<1	1	54	55	<1	49	6	-
30-Oct-07	<2	<2	16	560	576	23	490	62	-
7-Jan-08	<5	<5	9	370	379	7	420	77	-
1-Apr-08	7	<5	32	1000	1039	33	850	130	-
2-Jul-08	6 J	BDL "5"	27	710	737	10	520	74	-
13-Oct-08	5	<1	33	710	748	10	680	110	-
13-Jan-09	7	<2	37	860	904	22	640	86	-

"-" = Not analyzed; BDL = Below method detection limit; cumene = isopropylbenzene

*Data prior to 18 February 2000 taken from GES reports.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table III, cont.: Historic Dissolved Volatile Organics

Former Sunoco Service Station (DUNS # 0005-1078), 2899 Holme Avenue, Philadelphia, PA

(BTEX, MTBE, Naphthalene, Cumene (Isopropylbenzene) and TBA in ug/l)

OW 1 (April 2009 - present)

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Cumene	TBA
7-Apr-09	<10	<10	45	1100	1145	<10	810	93	-
9-Jul-09	3	<1	39	730	772	3	610	81	-
30-Oct-09	<1	<1	19	400	419	3	570	79	-
27-Jan-10	<5	<5	11	220	231	<5	370	61	-
6-May-10	230	110	180	1200	1720	110	310	29	-
14-Jul-10	53	6	8	170	237	220	220	31	-
8-Oct-10	30	2	3	95	130	35	110	20	-
17-Jan-11	12	<1	<1	8	20	12	41	7	-
4-Apr-11	29	3	11	93	136	68	240	33	-
26-Jul-11	51	5	9	70	135	30	190	35	-
5-Oct-11	49	6	12	120	187	40	160	35	-
16-Jan-12	77	4	8	75	164	29	230	30	-
25-Apr-12	25	2	5	49	81	17	160	26	-
12-Jul-12	21	2	9	66	98	28	150	27	-
18-Oct-12	19	1	6	44	70	21	92	18	-
4-Feb-13	4	<1	<1	3	7	8	24	4	-
22-Apr-13	11	<10	<10	35	46	22	98	<20	-
10-Jul-13	9	1	6	43	59	5	57	5	-
17-Oct-13	5	<1	<1	1	6	4	56	3	-
20-Jan-14	9	<1	6	32	47	15	53	16	-
17-Apr-14	11	<1	3	22	36	9	100	18	-
28-Jul-14	6	<1	4	22	32	18	63	18	-
29-Oct-14	6	<1	<1	5	11	3	23	5	-
5-Feb-15	<1	<1	<1	<1	<4	<1	<4	<2	-
13-Apr-15	3	<1	2	15	20	11	29	11	-
22-Jul-15	<1	<1	<1	<1	<4	<1	<4	<2	-
23-Nov-15	2	<1	1	10	13	7	19	10	-
11-Feb-16	2	<1	<1	3	5	2	5	2	-
4-May-16	2	<1	<1	5	7	3	10	4	-
26-Jul-16	1	<1	<1	3	4	2	4	3	-
6-Oct-16	1	<1	<1	1	2	<1	<4	<2	-
11-Jan-17	<1	<1	<1	<1	<4	<1	<4	<2	-
13-Apr-17	<1	<1	<1	1	1	<1	<4	<2	-
17-Jul-17	<1	<1	<1	<1	<4	<1	<4	<2	-
11-Oct-17	<1	<1	<1	1	1	<1	5	4	-
19-Jan-18	<1	<1	<1	<1	<4	<1	<4	2	-
23-Apr-18	<1	<1	<1	<1	<4	<1	<4	3	-
11-Jul-18	<1	<1	<1	<1	<4	<1	<4	<2	-
16-Oct-18	<1	<1	<1	<5	<8	<1	<10	<5	-
10-Jan-19	5	<1	<1	<5	<8	<1	**33**	<5	-
23-Apr-19	**6**	<1	<1	<5	6	<1	21	<5	-

*Data prior to 18 February 2000 taken from GES reports.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table III, cont.: Historic Dissolved Volatile Organics

Former Sunoco Service Station (DUNS # 0005-1078), 2899 Holme Avenue, Philadelphia, PA

(BTEX, MTBE, Naphthalene, Cumene (Isopropylbenzene) and TBA in ug/l)

OW 2 (May 1997-January 2009)

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Cumene	TBA
13-May-97	<20	<20	BDL	<40	<80	1700	<10	-	-
17-Oct-97	130	13	BDL	14	157	7500	8	-	-
23-Mar-98	1200	59	BDL	58	1317	21000	BDL	-	-
10-Jun-98	1200	41	<5	47	1288	29000	<5	<5	-
30-Sep-98	680	<50	<50	<50	680	25000	<50	<50	-
22-Dec-98	600	<100	<100	<100	600	36000	<100	<100	-
10-Feb-99	<500	BDL	BDL	BDL	BDL	59000	BDL	BDL	-
27-Sep-99	<130	BDL	BDL	BDL	BDL	130000	BDL	BDL	-
18-Feb-00	12	2.4	18	980	1012.4	80000	140	30	-
2-Jun-00	1.7	BDL	BDL	13.6	15.3	220000	BDL	BDL	-
30-Aug-00	<50	<50	<50	<50	<200	12000	<50	<50	-
10-Nov-00	<25	<25	<25	<25	<100	6800	<25	<25	-
21-Feb-01	BDL	BDL	BDL	BDL	BDL	4400	BDL	BDL	-
5-Jun-01	BDL	BDL	BDL	BDL	BDL	330	BDL	BDL	-
5-Sep-01	BDL	BDL	BDL	BDL	BDL	860	BDL	BDL	-
7-Dec-01	BDL	BDL	BDL	BDL	BDL	2100	BDL	BDL	-
11-Mar-02	Not sampled, well was dry at 40 feet.								
18-Jun-02	Not sampled, well was dry at 40 feet.								
22-Aug-02	Not sampled, well was dry at 40 feet.								
5-Nov-02	BDL	BDL	BDL	BDL	BDL	2100	BDL	BDL	-
13-Feb-03	BDL	BDL	BDL	BDL	BDL	<5	BDL	BDL	-
15-May-03	BDL	BDL	BDL	BDL	BDL	1000	BDL	BDL	BDL
7-Aug-03	BDL	BDL	BDL	BDL	BDL	280	BDL	BDL	BDL
19-Nov-03	BDL	BDL	BDL	<5	<5	170	<5	BDL	BDL
5-Feb-04	BDL	BDL	BDL	BDL	BDL	6	BDL	BDL	BDL
11-May-04	BDL	BDL	BDL	BDL	BDL	4 J	BDL	BDL	BDL of 10
21-Jul-04	BDL	BDL	BDL	BDL	BDL	2 J	BDL	BDL	BDL of 10
26-Oct-04	BDL	BDL	BDL	BDL	BDL	0.7 J	BDL	BDL	BDL of 10
10-Jan-05	BDL	BDL	BDL	BDL	BDL	0.8 J	BDL	BDL	BDL of 10
15-Apr-05	BDL	BDL	BDL	BDL	BDL	1 J	BDL	BDL	BDL of 10
20-Jul-05	BDL	BDL	BDL	BDL	BDL	1 J	BDL	BDL	BDL of 10
14-Oct-05	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	0.9 J	BDL "1"	BDL "1"	BDL of 10
12-Jan-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	BDL	BDL "1"	BDL "1"	BDL of 10
12-Apr-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	BDL	BDL "1"	BDL "1"	BDL of 10
13-Jul-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	BDL	BDL "1"	BDL "1"	BDL of 10
4-Oct-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	BDL	BDL "1"	BDL "1"	BDL of 10
10-Jan-07	<1	<1	<1	<1	<4	<1	<4	<2	<5
23-Apr-07	<1	<1	<1	<1	<4	<1	<4	<2	<5
3-Jul-07	<1	<1	<1	<1	<4	<1	<4	<2	-
30-Oct-07	<1	<1	<1	<1	<4	<1	<4	<2	-
7-Jan-08	<1	<1	<1	<1	<4	<1	<4	<2	-
1-Apr-08	<1	<1	<1	<1	<4	<1	<4	<2	-
2-Jul-08	<1	<1	<1	<1	<4	<1	<4	<2	-
13-Oct-08	<1	<1	<1	<1	<4	<1	<4	<2	-
13-Jan-09	<1	<1	<1	<1	<4	<1	<4	<2	-

"-" = Not analyzed; BDL = Below method detection limit; cumene = isopropylbenzene

*Data prior to 18 February 2000 taken from GES reports.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table III, cont.: Historic Dissolved Volatile Organics

Former Sunoco Service Station (DUNS # 0005-1078), 2899 Holme Avenue, Philadelphia, PA

(BTEX, MTBE, Naphthalene, Cumene (Isopropylbenzene) and TBA in ug/l)

OW 2 (April 2009 - present)

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Cumene	TBA
7-Apr-09	<1	<1	<1	<1	<4	<1	<4	<2	-
9-Jul-09	<1	2	<1	2	4	<1	<4	<2	-
30-Oct-09	<1	<1	<1	<1	<4	<1	<4	<2	-
27-Jan-10	<1	<1	<1	<1	<4	<1	<4	<2	-
6-May-10	<1	<1	<1	<1	<4	<1	<4	<2	-
14-Jul-10	<1	<1	<1	<1	<4	<1	<4	<2	-
8-Oct-10	2	<1	<1	<1	2	<1	<4	<2	-
17-Jan-11	8	<1	<1	<1	8	<1	<4	<2	-
4-Apr-11	1	<1	<1	<1	1	<1	<4	<2	-
26-Jul-11	10	<1	<1	<1	10	<1	<4	<2	-
5-Oct-11	33	<1	<1	<1	33	<1	<4	<2	-
16-Jan-12	72	<1	<1	<1	72	1	<4	<2	-
25-Apr-12	62	<1	<1	<1	62	2	<4	<2	-
12-Jul-12	79	<1	<1	<1	79	3	<4	<2	-
18-Oct-12	100	<1	<1	<1	100	5	<4	<2	-
4-Feb-13	180	<1	<1	2	182	8	<4	<2	-
22-Apr-13	160	<5	<5	<5	160	9	<20	<10	-
10-Jul-13	150	<1	<1	<1	150	8	<4	<2	-
17-Oct-13	100	<1	<1	<1	100	9	<4	<2	-
20-Jan-14	74	<1	<1	<1	74	9	<4	<2	-
17-Apr-14	25	<1	<1	<1	25	21	<4	<2	-
28-Jul-14	30	<1	<1	<1	30	14	<4	<2	-
29-Oct-14	13	<1	<1	<1	13	17	<4	<2	-
5-Feb-15	5	<1	<1	<1	5	15	<4	<2	-
13-Apr-15	2	<1	<1	<1	2	9	<4	<2	-
22-Jul-15	3	<1	<1	<1	3	2	<4	<2	-
23-Nov-15	1	<1	<1	<1	1	1	<4	<2	-
11-Feb-16	<1	<1	<1	<1	<4	<1	<4	<2	-
4-May-16	2	<1	<1	<1	2	2	<4	<2	-
26-Jul-16	<1	<1	<1	<1	<4	<1	<4	<2	-
6-Oct-16	1	<1	<1	<1	1	<1	<4	<2	-
11-Jan-17	<10	<10	<10	<10	<40	<10	<40	<20	-
13-Apr-17	1	<1	<1	<1	1	<1	<4	<2	-
17-Jul-17	3	<1	<1	<1	3	<1	<4	<2	-
11-Oct-17	4	<1	<1	<1	4	<1	<4	<2	-
19-Jan-18	**7**	<1	<1	<1	7	<1	<4	<2	-
23-Apr-18	**8**	<1	<1	<1	8	<1	<4	<2	-
11-Jul-18	4	<1	<1	<1	4	1	<4	<2	-
16-Oct-18	1	<1	<1	<5	1	<1	<10	<5	-
10-Jan-19	<1	<1	<1	<5	BDL	<1	<10	<5	-
23-Apr-19	<1	<1	<1	<5	BDL	<1	<10	<5	-

"-" = Not analyzed; BDL = Below method detection limit; cumene = isopropylbenzene

*Data prior to 18 February 2000 taken from GES reports.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table III, cont.: Historic Dissolved Volatile Organics

Former Sunoco Service Station (DUNS # 0005-1078), 2899 Holme Avenue, Philadelphia, PA

(BTEX, MTBE, Naphthalene and Cumene (Isopropylbenzene) in ug/l)

OW 3 (May 1997-January 2009)

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Cumene	TBA
13-May-97	1	BDL	BDL	BDL	1	16	BDL	-	-
17-Oct-97	BDL	BDL	BDL	BDL	BDL	33	BDL		-
23-Mar-98	1	BDL	BDL	BDL	1	22	BDL	-	-
10-Jun-98	<5	<5	<5	<5	BDL	16	<5	<5	-
30-Sep-98	<5	<5	<5	<5	BDL	11	<5	<5	-
22-Dec-98	<5	<5	<5	<5	BDL	26	<5	<5	-
10-Feb-99	<5	BDL	BDL	BDL	BDL	53	BDL	BDL	-
27-Sep-99	BDL	BDL	BDL	BDL	BDL	37	BDL	BDL	-
18-Feb-00	BDL	BDL	BDL	BDL	BDL	19	BDL	BDL	-
2-Jun-00	BDL	BDL	BDL	BDL	BDL	13	BDL	BDL	-
30-Aug-00	<5	BDL	BDL	BDL	<5	12	<5	BDL	-
10-Nov-00	<5	<5	<5	<5	<20	10	<5	<5	-
21-Feb-01	BDL	BDL	BDL	BDL	BDL	7	BDL	BDL	-
5-Jun-01	BDL	BDL	BDL	BDL	BDL	8	BDL	BDL	-
5-Sep-01	BDL	BDL	BDL	BDL	BDL	7	BDL	BDL	-
7-Dec-01	BDL	BDL	BDL	BDL	BDL	9	BDL	BDL	-
11-Mar-02	BDL	BDL	BDL	BDL	BDL	16	BDL	BDL	-
18-Jun-02	BDL	BDL	BDL	BDL	BDL	17	BDL	BDL	-
22-Aug-02	BDL	BDL	BDL	BDL	BDL	16	BDL	BDL	BDL
5-Nov-02	BDL	BDL	BDL	BDL	BDL	16	BDL	BDL	-
13-Feb-03	BDL	BDL	BDL	BDL	BDL	8	BDL	BDL	-
15-May-03	BDL	BDL	BDL	BDL	BDL	8	BDL	BDL	BDL
7-Aug-03	BDL	BDL	BDL	BDL	BDL	6	BDL	BDL	BDL
19-Nov-03	BDL	BDL	BDL	BDL	BDL	8	BDL	BDL	BDL
5-Feb-04	BDL	BDL	BDL	BDL	BDL	6	BDL	BDL	BDL
11-May-04	BDL	BDL	BDL	BDL	BDL	5	BDL	BDL	BDL of 10
21-Jul-04	BDL	BDL	BDL	BDL	BDL	5 J	BDL	BDL	BDL of 10
26-Oct-04	BDL	BDL	BDL	BDL	BDL	4 J	BDL	BDL	BDL of 10
10-Jan-05	BDL	BDL	BDL	BDL	BDL	4 J	BDL	BDL	BDL of 10
15-Apr-05	BDL	BDL	BDL	BDL	BDL	4 J	BDL	BDL	BDL of 10
20-Jul-05	BDL	BDL	BDL	BDL	BDL	4 J	BDL	BDL	BDL of 10
14-Oct-05	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	4 J	BDL "1"	BDL "1"	BDL of 10
12-Jan-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	3 J	BDL "1"	BDL "1"	BDL of 10
12-Apr-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	5 J	BDL "1"	BDL "1"	BDL of 10
13-Jul-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	5 J	BDL "1"	BDL "1"	BDL of 10
4-Oct-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	5 J	BDL "1"	BDL "1"	BDL of 10
10-Jan-07	<1	<1	<1	<1	<4	7	<4	<2	<5
23-Apr-07	<1	<1	<1	<1	<4	9	<4	<2	<5
3-Jul-07	<1	<1	<1	<1	<4	5	<4	<2	-
30-Oct-07	<1	<1	<1	<1	<4	6	<4	<2	-
7-Jan-08	<1	<1	<1	<1	<4	<1	<4	<2	-
1-Apr-08	<1	<1	<1	<1	<4	<1	<4	<2	-
2-Jul-08	<1	<1	<1	<1	<4	<1	<4	<2	-
13-Oct-08	<1	<1	<1	<1	<4	<1	<4	<2	-
13-Jan-09	<1	<1	<1	<1	<4	<1	<4	<2	-

"-" = Not analyzed; BDL = Below method detection limit; cumene = isopropylbenzene

*Data prior to 18 February 2000 taken from GES reports.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table III, cont.: Historic Dissolved Volatile Organics

Former Sunoco Service Station (DUNS # 0005-1078), 2899 Holme Avenue, Philadelphia, PA

(BTEX, MTBE, Naphthalene, Cumene (Isopropylbenzene) and TBA in ug/l)

OW 3 (April 2009 - present)

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Cumene	TBA
7-Apr-09	<1	<1	<1	<1	<4	<1	<4	<2	-
9-Jul-09	<1	<1	<1	<1	<4	<1	<4	<2	-
30-Oct-09	<1	<1	<1	<1	<4	4	<4	<2	-
27-Jan-10	<1	<1	<1	<1	<4	1	<4	<2	-
6-May-10	<1	<1	<1	<1	<4	1	<4	<2	-
14-Jul-10	<1	<1	<1	<1	<4	1	<4	<2	-
8-Oct-10	<1	<1	<1	<1	<4	<1	<4	<2	-
17-Jan-11	<1	<1	<1	<1	<4	<1	<4	<2	-
4-Apr-11	<1	<1	<1	<1	<4	<1	<4	<2	-
26-Jul-11	<1	<1	<1	<1	<4	<1	<4	<2	-
5-Oct-11	<1	<1	<1	<1	<4	<1	<4	<2	-
16-Jan-12	<1	<1	<1	<1	<4	<1	<4	<2	-
25-Apr-12	<1	<1	<1	<1	<4	<1	<4	<2	-
12-Jul-12	<1	<1	<1	<1	<4	<1	<4	<2	-
18-Oct-12	<1	<1	<1	<1	<4	<1	<4	<2	-
4-Feb-13	<1	<1	<1	<1	<4	<1	<4	<2	-
22-Apr-13	<1	<1	<1	<1	<4	<1	<4	<2	-
10-Jul-13	<1	<1	<1	<1	<4	<1	<4	<2	-
17-Oct-13	<1	<1	<1	<1	<4	<1	<4	<2	-
20-Jan-14	<1	<1	<1	<1	<4	<1	<4	<2	-
17-Apr-14	<1	<1	<1	<1	<4	<1	<4	<2	-
28-Jul-14	<1	<1	<1	<1	<4	<1	<4	<2	-
29-Oct-14	<1	<1	<1	<1	<4	<1	<4	<2	-
5-Feb-15	<1	<1	<1	<1	<4	<1	<4	<2	-
13-Apr-15	<1	<1	<1	<1	<4	<1	<4	<2	-
22-Jul-15	<1	<1	<1	<1	<4	<1	<4	<2	-
23-Nov-15	<1	<1	<1	<1	<4	<1	<4	<2	-
11-Feb-16	<1	<1	<1	<1	<4	<1	<4	<2	-
4-May-16	<1	<1	<1	<1	<4	<1	<4	<2	-
26-Jul-16	<1	<1	<1	<1	<4	<1	<4	<2	-
6-Oct-16	<1	<1	<1	<1	<4	<1	<4	<2	-
11-Jan-17	<1	<1	<1	<1	<4	<1	<4	<2	-
13-Apr-17	<1	<1	<1	<1	<4	<1	<4	<2	-
17-Jul-17	<1	<1	<1	<1	<4	<1	<4	<2	-
11-Oct-17	<1	<1	<1	<1	<4	<1	<4	<2	-
19-Jan-18	<1	<1	<1	<1	<4	<1	<4	<2	-
23-Apr-18	<1	<1	<1	<1	<4	<1	<4	<2	-
11-Jul-18	<1	<1	<1	<1	<4	<1	<4	<2	-
16-Oct-18	<1	<1	<1	<5	<8	<1	<10	<5	-
10-Jan-19	<1	<1	<1	<5	<8	<1	<10	<5	-
23-Apr-19	<1	<1	<1	<5	<8	<1	<10	<5	-

"-" = Not analyzed; BDL = Below method detection limit; cumene = isopropylbenzene

*Data prior to 18 February 2000 taken from GES reports.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table III, cont.: Historic Dissolved Volatile Organics

Former Sunoco Service Station (DUNS # 0005-1078), 2899 Holme Avenue, Philadelphia, PA

(BTEX, MTBE, Naphthalene and Cumene (Isopropylbenzene) in ug/l)

OW 4 (June 1998-January 2009)

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Cumene	TBA
10-Jun-98	390	<5	53	30	473	20	120	17	-
30-Sep-98	300	<5	42	23	365	19	110	15	-
22-Dec-98	260	<5	10	<5	270	29	83	13	-
10-Feb-99	180	BDL	6	BDL	186	34	52	11	-
27-Sep-99	60	BDL	6	29	95	31	130	8	-
18-Feb-00	140	BDL	7.5	4.6	152.1	BDL	25	8.9	-
2-Jun-00	130	BDL	11	BDL	141	20	BDL	11	-
30-Aug-00	190	<5	19	<5	209	21	49	9	-
10-Nov-00	190	<25	<25	<25	190	<25	37	<25	-
21-Feb-01	120	BDL	12	BDL	132	25	53	8	-
5-Jun-01	120	BDL	19	BDL	139	26	31	8	-
5-Sep-01	140	BDL	30	BDL	170	28	31	8	-
7-Dec-01	36	BDL	<5	BDL	36	27	15	<5	-
11-Mar-02	Not sampled, well was dry at 40 feet.								
18-Jun-02	Not sampled, well was dry at 40 feet.								
22-Aug-02	Not sampled, well was dry at 40 feet.								
5-Nov-02	Not sampled, well was dry at 40 feet.								
13-Feb-03	Not sampled due to insufficient water column.								
15-May-03	14	BDL	BDL	BDL	14	15	BDL	BDL	<80
7-Aug-03	52	BDL	<5	BDL	52	18	<5	<5	<80
19-Nov-03	27	BDL	<5	<5	27	23	<5	<5	BDL
5-Feb-04	30	BDL	<5	BDL	30	18	<5	<5	<80
11-May-04	19	BDL	1 J	BDL	20	17	3 J	3 J	30 J
21-Jul-04	44	BDL	3 J	BDL	47	19	5 J	4 J	20 J
26-Oct-04	21	BDL	1 J	BDL	22	16	4 J	1 J	23
10-Jan-05	7	BDL	BDL	BDL	7	14	BDL	1 J	15 J
15-Apr-05	1 J	BDL	BDL	BDL	1 J	10	BDL	BDL	BDL of 10
20-Jul-05	2 J	BDL	BDL	BDL	2 J	12	BDL	BDL	12 J
14-Oct-05	0.7 J	BDL "0.7"	BDL "0.8"	BDL "0.8"	0.7	10	BDL "1"	BDL "1"	10 J
12-Jan-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	6	BDL "1"	BDL "1"	BDL of 10
12-Apr-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	4 J	BDL "1"	BDL "1"	BDL of 10
13-Jul-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	2 J	BDL "1"	BDL "1"	BDL of 10
4-Oct-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	3 J	BDL "1"	BDL "1"	BDL of 10
10-Jan-07	<1	<1	<1	<1	<4	5	<4	<2	<5
23-Apr-07	<1	<1	<1	<1	<4	5	<4	<2	62
3-Jul-07	<1	<1	<1	<1	<4	3	<4	<2	-
30-Oct-07	<1	<1	<1	<1	<4	7	<4	<2	-
7-Jan-08	<1	<1	<1	<1	<4	5	<4	<2	-
1-Apr-08	<1	<1	<1	<1	<4	7	<4	<2	-
2-Jul-08	<1	<1	<1	<1	<4	3	<4	<2	-
13-Oct-08	<1	<1	<1	<1	<4	4	<4	<2	-
13-Jan-09	<1	<1	<1	<1	<4	2	<4	<2	-

"-" = Not analyzed; BDL = Below method detection limit; cumene = isopropylbenzene

*Data prior to 18 February 2000 taken from GES reports.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table III, cont.: Historic Dissolved Volatile Organics

Former Sunoco Service Station (DUNS # 0005-1078), 2899 Holme Avenue, Philadelphia, PA

(BTEX, MTBE, Naphthalene, Cumene (Isopropylbenzene) and TBA in ug/l)

OW 4 (April 2009 - present)

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Cumene	TBA
7-Apr-09	<1	<1	<1	<1	<4	2	<4	<2	-
9-Jul-09	<1	<1	<1	2	2	2	<4	<2	-
30-Oct-09	<1	<1	<1	<1	<4	1	<4	<2	-
27-Jan-10	<1	<1	<1	<1	<4	2	<4	<2	-
6-May-10	<1	<1	<1	<1	<4	2	<4	<2	-
14-Jul-10	<1	<1	<1	<1	<4	<1	<4	<2	-
8-Oct-10	<1	<1	<1	<1	<4	3	<4	<2	-
17-Jan-11	<1	<1	<1	<1	<4	3	<4	<2	-
4-Apr-11	<1	<1	<1	<1	<4	6	<4	<2	-
26-Jul-11	<1	<1	<1	<1	<4	4	<4	<2	-
5-Oct-11	<1	<1	<1	<1	<4	3	<4	<2	-
16-Jan-12	<1	<1	<1	<1	<4	3	<4	<2	-
25-Apr-12	<1	<1	<1	<1	<4	3	<4	<2	-
12-Jul-12	<1	<1	<1	<1	<4	4	<4	<2	-
18-Oct-12	<1	<1	<1	<1	<4	5	<4	<2	-
4-Feb-13	<1	<1	<1	<1	<4	3	<4	<2	-
22-Apr-13	<1	<1	<1	<1	<4	4	<4	<2	-
10-Jul-13	<1	<1	<1	<1	<4	1	<4	<2	-
17-Oct-13	<1	<1	<1	<1	<4	1	<4	<2	-
20-Jan-14	<1	<1	<1	<1	<4	1	<4	<2	-
17-Apr-14	<1	<1	<1	<1	<4	<1	<4	<2	-
28-Jul-14	<1	<1	<1	<1	<4	<1	<4	<2	-
29-Oct-14	<1	<1	<1	<1	<4	<1	<4	<2	-
5-Feb-15	<1	<1	<1	<1	<4	<1	<4	<2	-
13-Apr-15	<1	<1	<1	<1	<4	<1	<4	<2	-
22-Jul-15	<1	<1	<1	<1	<4	<1	<4	<2	-
23-Nov-15	<1	<1	<1	<1	<4	<1	<4	<2	-
11-Feb-16	<1	<1	<1	<1	<4	<1	<4	<2	-
4-May-16	<1	<1	<1	<1	<4	<1	<4	<2	-
26-Jul-16	<1	<1	<1	<1	<4	<1	<4	<2	-
6-Oct-16	<1	<1	<1	<1	<4	<1	<4	<2	-
11-Jan-17	<1	<1	<1	<1	<4	<1	<4	<2	-
13-Apr-17	<1	<1	<1	<1	<4	<1	<4	<2	-
17-Jul-17	<1	<1	<1	<1	<4	<1	<4	<2	-
11-Oct-17	<1	<1	<1	<1	<4	<1	<4	<2	-
19-Jan-18	<1	<1	<1	<1	<4	<1	<4	<2	-
23-Apr-18	<1	<1	<1	<1	<4	<1	<4	<2	-
11-Jul-18	<1	<1	<1	<1	<4	<1	<4	<2	-
16-Oct-18	<1	<1	<1	<5	<8	<1	<10	<5	-
10-Jan-19	<1	<1	<1	<5	<8	<1	<10	<5	-
23-Apr-19	<1	<1	<1	<5	<8	<1	<10	<5	-

"-" = Not analyzed; BDL = Below method detection limit; cumene = isopropylbenzene

*Data prior to 18 February 2000 taken from GES reports.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table III, cont.: Historic Dissolved Volatile Organics

Former Sunoco Service Station (DUNS # 0005-1078), 2899 Holme Avenue, Philadelphia, PA

(BTEX, MTBE, Naphthalene and Cumene (Isopropylbenzene) in ug/l)

OW 5 (November 2000-January 2009) (This well was installed on 12 October 2000)

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Cumene	TBA
10-Nov-00	110	120	120	3100	3450	2600	550	<100	-
21-Feb-01	76	88	110	4500	4774	920	680	83	-
5-Jun-01	16	11	46	1100	1173	680	430	73	-
5-Sep-01	100	<25	93	1600	1793	8100	470	63	-
7-Dec-01	140	130	140	2100	2510	17000	510	55	-
11-Mar-02	93	45	100	720	958	19000	310	37	-
18-Jun-02	95	250	310	3500	4155	2300	740	86	-
22-Aug-02	88	100	180	930	1298	1700	410	58	720
5-Nov-02	95	120	120	1200	1535	1700	240	43	800
13-Feb-03	40	220	360	2500	3120	98	670	86	-
15-May-03	<10	49	140	4000	4189	220	570	73	<160
7-Aug-03	<10	<10	39	2700	2739	620	440	44	270
19-Nov-03	<25	<25	36	2500	2536	5500	660	55	730
5-Feb-04	<10	<10	18	580	598	2000	170	17	400
11-May-04	8 J	BDL	29 J	360	397	850	170	18 J	120
21-Jul-04	36 J	BDL	64 J	410	510	2800	180 J	BDL	BDL of 500
26-Oct-04	53 J	BDL	51 J	250 J	354 J	3800	250	BDL	610
10-Jan-05	40 J	BDL	59 J	300	399	2700	280	30 J	370 J
15-Apr-05	8	1 J	29	220	258	2500	140	25	370
20-Jul-05	BDL	BDL	BDL	BDL	BDL	1800	BDL	BDL	BDL
14-Oct-05	14 J	BDL "4"	BDL "4"	29	43	4100	19 J	BDL "5"	480
12-Jan-06	12	2 J	27	120	161	2000	110	15	440
12-Apr-06	2 J	1 J	19	69	91	200	61	13	130
13-Jul-06	BDL "0.5"	BDL "0.7"	3 J	3 J	6 J	33	16	3 J	40 J
4-Oct-06	5 J	2 J	16	51	74	180	62	17	390
10-Jan-07	<1	<1	8	16	24	46	24	13	42
23-Apr-07	<1	<1	9	19	28	35	28	12	34
3-Jul-07	1	<1	11	55	67	95	62	16	-
30-Oct-07	11	1	14	87	113	270	85	18	-
7-Jan-08	9	1	16	72	98	190	93	24	-
1-Apr-08	6	2	40	180	228	94	160	36	-
2-Jul-08	3	1	24	120	148	41	120	29	-
13-Oct-08	7	2	24	140	173	59	130	25	-
13-Jan-09	6	16	41	230	293	52	160	35	-

"-" = Not analyzed; BDL = Below method detection limit; cumene = isopropylbenzene

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table III, cont.: Historic Dissolved Volatile Organics

Former Sunoco Service Station (DUNS # 0005-1078), 2899 Holme Avenue, Philadelphia, PA

(BTEX, MTBE, Naphthalene, Cumene (Isopropylbenzene) and TBA in ug/l)

OW 5 (April 2009 - present)

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Cumene	TBA
7-Apr-09	2	3	32	190	227	20	200	35	-
9-Jul-09	1	2	27	140	170	11	160	36	-
30-Oct-09	3	1	17	68	89	9	87	26	-
27-Jan-10	<1	<1	5	12	17	2	17	13	-
6-May-10	8	1	9	21	39	160	20	9	-
14-Jul-10	130	16	85	160	391	1900	120	21	-
8-Oct-10	260	16	180	180	636	1700	100	35	-
17-Jan-11	190	9	82	92	373	610	94	23	-
4-Apr-11	170	8	70	83	331	390	68	19	-
26-Jul-11	220	2	55	18	295	160	11	17	-
5-Oct-11	58	<1	13	7	78	89	9	9	-
16-Jan-12	120	<1	11	5	136	96	15	9	-
25-Apr-12	140	<1	20	7	167	120	6	11	-
12-Jul-12	170	1	41	23	235	85	17	15	-
18-Oct-12	59	<1	26	18	103	72	13	15	-
4-Feb-13	32	<1	5	<1	37	38	<4	6	-
22-Apr-13	18	<5	7	5	30	39	<20	<10	-
10-Jul-13	<1	<1	<1	<1	<4	<1	<4	<2	-
17-Oct-13	<1	<1	<1	<1	<4	<1	<4	<2	-
20-Jan-14	10	<1	2	3	15	33	<4	4	-
17-Apr-14	11	<1	3	5	19	30	5	4	-
28-Jul-14	8	<1	<1	<1	8	20	<4	<2	-
29-Oct-14	8	<1	2	<1	10	23	<4	<2	-
5-Feb-15	<1	<1	<1	<1	<4	7	<4	<2	-
13-Apr-15	4	<1	2	2	8	23	<4	2	-
22-Jul-15	5	<1	2	4	11	30	<4	4	-
23-Nov-15	3	<1	2	2	7	26	<4	3	-
11-Feb-16	<1	<1	3	4	7	18	4	4	-
4-May-16	1	<1	1	<1	2	16	<4	2	-
26-Jul-16	2	<1	1	<1	3	21	<4	3	-
6-Oct-16	2	<1	2	2	6	21	<4	3	-
11-Jan-17	<1	<1	2	2	4	16	<4	4	-
13-Apr-17	<1	<1	2	1	3	13	<4	3	-
17-Jul-17	<1	<1	1	2	3	11	<4	<2	-
11-Oct-17	<1	<1	1	<1	1	7	<4	<2	-
19-Jan-18	<1	<1	1	<1	1	4	<4	2	-
23-Apr-18	<1	<1	1	<1	1	1	<4	<2	-
11-Jul-18	<1	<1	<1	<1	<4	<1	<4	<2	-
16-Oct-18	<1	<1	<1	<5	<8	2	<10	<5	-
10-Jan-19	<1	<1	<1	<5	<8	6	<10	<5	-
23-Apr-19	<1	<1	<1	<5	<8	**22**	<10	<5	-

"-" = Not analyzed; BDL = Below method detection limit; cumene = isopropylbenzene

*Data prior to 18 February 2000 taken from GES reports.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table III, cont.: Historic Dissolved Volatile Organics

Former Sunoco Service Station (DUNS # 0005-1078), 2899 Holme Avenue, Philadelphia, PA

(BTEX, MTBE, Naphthalene and Cumene (Isopropylbenzene) in ug/l)

OW 6 (November 2000-January 2009) (This well was installed on 12 October 2000)

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Cumene	TBA
10-Nov-00	<50	<50	<50	<50	<200	18000	<50	<50	-
21-Feb-01	BDL	BDL	BDL	BDL	BDL	12000	BDL	BDL	-
5-Jun-01	10	BDL	BDL	BDL	10	13000	<5	BDL	-
5-Sep-01	BDL	BDL	BDL	BDL	BDL	6900	BDL	BDL	-
7-Dec-01	<25	BDL	BDL	BDL	<25	13000	BDL	BDL	-
11-Mar-02	<25	BDL	BDL	BDL	<25	19000	BDL	BDL	-
18-Jun-02	<25	BDL	BDL	BDL	<25	11000	BDL	BDL	-
22-Aug-02	<50	BDL	BDL	BDL	<50	21000	BDL	BDL	2900
5-Nov-02	BDL	BDL	BDL	BDL	BDL	29000	BDL	BDL	<5000
13-Feb-03	<50	BDL	BDL	BDL	BDL	28000	BDL	BDL	-
15-May-03	BDL	BDL	BDL	BDL	BDL	13000	BDL	BDL	1000
7-Aug-03	BDL	BDL	BDL	BDL	BDL	3300	BDL	BDL	BDL
19-Nov-03	BDL	BDL	BDL	8	8	1400	16	BDL	BDL
5-Feb-04	BDL	BDL	BDL	BDL	BDL	2700	<10	BDL	<160
11-May-04	BDL	BDL	16 J	BDL	16 J	960	BDL	BDL	BDL of 100
21-Jul-04	BDL	BDL	BDL	BDL	BDL	210	BDL	BDL	BDL of 20
26-Oct-04	BDL	BDL	BDL	BDL	BDL	53	BDL	BDL	BDL of 10
10-Jan-05	BDL	BDL	BDL	BDL	BDL	170	BDL	BDL	BDL of 20
15-Apr-05	BDL	BDL	BDL	BDL	BDL	130	BDL	BDL	BDL of 10
20-Jul-05	BDL	BDL	BDL	BDL	BDL	210	BDL	BDL	BDL of 40
14-Oct-05	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	9	BDL "1"	BDL "1"	BDL of 10
12-Jan-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	34	BDL "1"	BDL "1"	BDL of 10
12-Apr-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	15	BDL "1"	BDL "1"	BDL of 10
13-Jul-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	5	BDL "1"	BDL "1"	BDL of 10
4-Oct-06	BDL "0.5"	BDL "0.7"	BDL "0.8"	BDL "0.8"	BDL	14	BDL "1"	BDL "1"	BDL of 10
10-Jan-07	<1	<1	<1	<1	<4	5	<4	<2	<5
23-Apr-07	<1	<1	<1	<1	<4	25	<4	<2	<5
3-Jul-07	<1	<1	<1	<1	<4	7	<4	<2	-
30-Oct-07	<1	<1	<1	<1	<4	7	<4	<2	-
7-Jan-08	<1	<1	<1	<1	<4	5	<4	<2	-
1-Apr-08	<1	<1	<1	<1	<4	5	<4	<2	-
2-Jul-08	<1	<1	<1	<1	<4	3	<4	<2	-
13-Oct-08	<1	<1	<1	<1	<4	3	<4	<2	-
13-Jan-09	<1	<1	<1	<1	<4	3	<4	<2	-

"-" = Not analyzed; BDL = Below method detection limit; cumene = isopropylbenzene

*Data prior to 18 February 2000 taken from GES reports.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table III, cont.: Historic Dissolved Volatile Organics

Former Sunoco Service Station (DUNS # 0005-1078), 2899 Holme Avenue, Philadelphia, PA

(BTEX, MTBE, Naphthalene, Cumene (Isopropylbenzene) and TBA in ug/l)

OW 6 (April 2009 - present)

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Cumene	TBA
7-Apr-09	<1	<1	<1	<1	<4	2	<4	<2	-
9-Jul-09	<1	<1	<1	<1	<4	2	<4	<2	-
30-Oct-09	<1	<1	<1	<1	<4	2	<4	<2	-
27-Jan-10	<1	<1	<1	<1	<4	4	<4	<2	-
6-May-10	<1	<1	<1	<1	<4	85	<4	<2	-
14-Jul-10	<1	<1	<1	<1	<4	230	<4	<2	-
8-Oct-10	2	<1	<1	<1	2	500	<4	<2	-
17-Jan-11	3	<1	<1	<1	3	630	<4	<2	-
4-Apr-11	5	<1	<1	<1	5	730	<4	<2	-
26-Jul-11	6	<1	<1	<1	6	710	<4	<2	-
5-Oct-11	6	<1	<1	<1	6	22	<4	<2	-
16-Jan-12	7	<1	<1	<1	7	530	<4	<2	-
25-Apr-12	11	<1	<1	<1	11	370	<4	<2	-
12-Jul-12	11	<2	<2	<2	11	460	<8	<4	-
18-Oct-12	21	<1	<1	<1	21	370	<4	<2	-
4-Feb-13	43	<1	<1	<1	43	<1	<4	<2	-
22-Apr-13	44	<1	<1	<1	43	130	<4	<2	-
10-Jul-13	43	<1	<1	<1	43	<1	<4	<2	-
17-Oct-13	26	<1	<1	<1	26	<1	<4	<2	-
20-Jan-14	23	<1	<1	<1	23	250	<4	<2	-
17-Apr-14	14	<2	<2	<2	14	98	<8	<4	-
28-Jul-14	12	<1	<1	<1	12	180	<4	<2	-
29-Oct-14	6	<1	<1	<1	6	4	<4	<2	-
5-Feb-15	1	<1	<1	<1	1	<1	<4	<2	-
13-Apr-15	4	<1	<1	<1	4	33	<4	<2	-
22-Jul-15	3	<1	<1	<1	3	73	<4	<2	-
23-Nov-15	3	<1	<1	<1	3	120	<4	<2	-
11-Feb-16	4	<1	<1	<1	4	110	<4	<2	-
4-May-16	3	<1	<1	<1	3	110	<4	<2	-
26-Jul-16	2	<1	<1	<1	2	98	<4	<2	-
6-Oct-16	2	<1	<1	<1	2	73	<4	<2	-
11-Jan-17	2	<1	<1	<1	2	110	<4	<2	-
13-Apr-17	2	<1	<1	<1	2	110	<4	<2	-
17-Jul-17	<1	<1	<1	<1	<4	14	<4	<2	-
11-Oct-17	<1	<1	<1	<1	<4	**29**	<4	<2	-
19-Jan-18	<1	<1	<1	<1	<4	9	<4	<2	-
23-Apr-18	2	<1	<1	<1	2	16	<4	<2	-
11-Jul-18	2	<1	<1	<1	2	6	<4	<2	-
16-Oct-18	2	<1	<1	<5	2	4	<10	<5	-
10-Jan-19	2	<1	<1	<5	2	2	<10	<5	-
23-Apr-19	<1	<1	<1	<5	<8	12	<10	<5	-

"-" = Not analyzed; BDL = Below method detection limit; cumene = isopropylbenzene

*Data prior to 18 February 2000 taken from GES reports.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table III, cont.: Historic Dissolved Volatile Organics

Former Sunoco Service Station (DUNS # 0005-1078), 2899 Holme Avenue, Philadelphia, PA

(BTEX, MTBE, Naphthalene and Cumene (Isopropylbenzene) in ug/l)

OW 7 (This well was installed on 19 March 2009)

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Cumene	TBA
7-Apr-09	3	16	7	56	82	47	49	<2	-
9-Jul-09	3	<1	<1	6	9	97	7	4	-
30-Oct-09	<1	<1	<1	<1	<4	2	<4	<2	-
27-Jan-10	1	<1	<1	4	5	84	8	4	-
6-May-10	<1	<1	<1	1	1	17	<4	<2	-
14-Jul-10	1	<1	<1	9	10	35	<4	<2	-
8-Oct-10	2	<1	<1	22	24	73	8	3	-
17-Jan-11	3	<1	<1	26	29	170	15	2	-
4-Apr-11	<1	<1	<1	11	11	35	4	<2	-
26-Jul-11	2	<1	<1	22	24	34	10	3	-
5-Oct-11	1	<1	<1	16	17	8	8	<2	-
16-Jan-12	1	<1	<1	19	20	8	9	<2	-
25-Apr-12	1	<1	<1	18	19	4	8	2	-
12-Jul-12	<1	<1	<1	9	9	4	5	<2	-
18-Oct-12	<1	<1	<1	16	16	8	8	2	-
4-Feb-13	<1	<1	<1	19	19	6	11	3	-
22-Apr-13	2	<1	<1	21	23	19	23	6	-
10-Jul-13	<1	<1	<1	5	5	2	4	<2	-
17-Oct-13	<1	<1	<1	7	7	<1	5	<2	-
20-Jan-14	<1	<1	<1	12	12	29	10	3	-
17-Apr-14	<1	<1	<1	5	5	2	5	<2	-
28-Jul-14	<1	<1	<1	7	7	2	4	<2	-
29-Oct-14	<1	<1	<1	22	22	2	16	3	-
5-Feb-15	<1	<1	<1	8	8	10	6	<2	-
13-Apr-15	<1	<1	<1	11	11	5	9	3	-
22-Jul-15	<1	<1	<1	4	4	<1	<4	<2	-
23-Nov-15	<1	<1	<1	3	3	32	<4	<2	-
11-Feb-16	<1	<1	<1	<1	<4	1	<4	<2	-
4-May-16	<1	<1	<1	2	2	7	<4	<2	-
26-Jul-16	<1	<1	<1	4	4	2	4	3	-
6-Oct-16	<1	<1	<1	3	3	16	<4	<2	-
11-Jan-17	<1	<1	<1	<1	<4	8	<4	<2	-
13-Apr-17	<1	<1	<1	<1	<4	15	<4	<2	-
17-Jul-17	<1	<1	<1	2	<4	<1	<4	<2	-
11-Oct-17	<1	<1	<1	<1	<4	4	<4	<2	-
19-Jan-18	<1	<1	<1	<1	<4	<1	<4	<2	-
23-Apr-18	<1	<1	<1	<1	<4	15	<4	<2	-
11-Jul-18	<1	<1	<1	<1	<4	18	<4	<2	-
16-Oct-18	<1	<1	<1	<5	<8	18	<10	<5	-
10-Jan-19	<1	<1	<1	<5	<8	20	<10	<5	-
23-Apr-19	<1	<1	<1	<5	<8	10	<10	<5	-

"-" = Not analyzed; BDL = Below method detection limit; cumene = isopropylbenzene

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table III, cont.: Historic Dissolved Volatile Organics

Former Sunoco Service Station (DUNS # 0005-1078), 2899 Holme Avenue, Philadelphia, PA

(BTEX, MTBE, Naphthalene and Cumene (Isopropylbenzene) in ug/l)

OW 8 (This well was installed on 19 March 2009)

Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene	Cumene	TBA
7-Apr-09	<5	88	140	1500	1728	10	430	64	-
9-Jul-09	<5	28	87	680	795	<5	350	64	-
30-Oct-09	1	10	60	420	491	5	250	55	-
27-Jan-10	<1	6	32	190	228	2	120	37	-
6-May-10	4	14	70	420	508	67	170	55	-
14-Jul-10	28	9	51	220	308	550	130	34	-
8-Oct-10	58	9	79	320	466	490	110	47	-
17-Jan-11	35	6	57	230	328	260	140	45	-
4-Apr-11	5	3	36	160	204	130	98	33	-
26-Jul-11	7	4	24	89	124	44	50	24	-
5-Oct-11	2	3	23	77	105	35	61	29	-
16-Jan-12	28	2	17	39	86	64	42	20	-
25-Apr-12	16	1	16	41	74	37	43	21	-
12-Jul-12	8	2	21	52	83	32	59	22	-
18-Oct-12	2	2	18	45	67	33	40	20	-
4-Feb-13	<1	<1	1	1	2	4	<4	3	-
22-Apr-13	2	2	14	26	44	19	22	14	-
10-Jul-13	<1	<1	<1	28	28	<1	46	6	-
17-Oct-13	<1	<1	<1	3	3	<1	9	<2	-
20-Jan-14	<1	<1	6	7	13	10	11	7	-
17-Apr-14	<1	<1	4	6	10	4	12	6	-
28-Jul-14	4	1	7	7	19	27	18	8	-
29-Oct-14	<1	<1	2	2	4	4	5	3	-
5-Feb-15	<1	<1	5	6	11	4	10	6	-
13-Apr-15	<1	<1	<1	<1	<4	1	<4	<2	-
22-Jul-15	<1	<1	<1	<1	<4	2	<4	<2	-
23-Nov-15	<1	<1	4	3	7	6	10	5	-
11-Feb-16	<1	<1	3	2	5	2	7	4	-
4-May-16	<1	<1	2	<1	2	1	<4	<2	-
26-Jul-16	<1	<1	3	2	5	3	5	3	-
6-Oct-16	<1	<1	3	2	5	3	6	4	-
11-Jan-17	<1	<1	3	1	4	2	5	3	-
13-Apr-17	<1	<1	4	2	6	1	7	4	-
17-Jul-17	<1	<1	<1	<1	<4	<1	<4	<2	-
11-Oct-17	<1	<1	<1	<1	<4	<1	<4	<2	-
19-Jan-18	<1	<1	1	<1	<4	<1	<4	<2	-
23-Apr-18	<1	<1	<1	<1	<4	<1	<4	<2	-
11-Jul-18	<1	<1	<1	<1	<4	<1	<4	<2	-
16-Oct-18	<1	<1	<1	<5	<8	<1	<10	<5	-
10-Jan-19	<1	<1	<1	<5	<8	4	<10	<5	-
23-Apr-19	<1	<1	<1	<5	<8	17	<10	<5	-

"-" = Not analyzed; BDL = Below method detection limit; cumene = isopropylbenzene

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table IV: Water Table Gradients
Former Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA
(all values in feet)

Date	Groundwater Flow Direction	Hydraulic Gradient (ft/ft)
4-Feb-13	Southwest	0.021
22-Apr-13	Southwest	0.021
10-Jul-13	Southwest	0.019
17-Oct-13	Southwest	0.019
20-Jan-14	Southwest	0.021
17-Apr-14	Southwest	0.019
28-Jul-14	Southwest	0.018
29-Oct-14	Southwest	0.017
5-Feb-15	Southwest	0.019
13-Apr-15	Southwest	0.019
22-Jul-15	Southwest	0.017
23-Nov-15	Southwest	0.018
11-Feb-16	Southwest	0.017
4-May-16	Southwest	0.019
26-Jul-16	Southwest	0.019
6-Oct-16	Southwest	0.017
11-Jan-17	Southwest	0.017
13-Apr-17	South	0.017
17-Jul-17	South	0.01
11-Oct-17	South	0.006
19-Jan-18	Southwest	0.003
23-Apr-18	Northwest	0.003
11-Jul-18	West	0.003
16-Oct-18	West	0.004
10-Jan-19	West	0.0034
23-Apr-19	West	0.005
8 Quarter Average	West Southwest	**0.005**
Average	**Southwest**	**0.014**

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table V
Well Schedule
Former Sunoco Service Station (0005-1078), 2899 Holme Avenue, Philadelphia, PA

Well	Installation Date	Consultant	Diameter (inches)	TOC (ft, elev.)	TD (ft)	Screened Interval (ft, bgs)		Depth to Bedrock (ft,bgs)	Comment
						Top	Base		
OW 1	12-May-97	GES	4	94.62	40.0	10.0	40.0	-	
OW 2	12-May-97	GES	4	94.44	40.0	10.0	40.0	-	
OW 3	12-May-97	GES	4	93.54	40.0	10.0	40.0	-	
OW 4	12-May-97	GES	4	95.09	40.0	10.0	40.0	-	
OW 5	12-Oct-00	MCE	4	93.76	50.0	15.0	50.0	37	
OW 6	12-Oct-00	MCE	4	94.03	50.0	15.0	50.0	-	
OW 7	19-Mar-09	MCE	4	93.85	50.0	10.0	50.0	41	
OW 8	19-Mar-09	MCE	4	93.45	50.0	10.0	50.0	30	
IW 1	9-Dec-02	MCE	2		50.0	45.0	50.0	-	
IW 2	9-Dec-02	MCE	2		50.0	45.0	50.0	-	
IW 3	9-Dec-02	MCE	2		50.0	45.0	50.0	-	
IW 4	9-Dec-02	MCE	2		50.0	45.0	50.0	-	
IW 5	9-Dec-02	MCE	2		50.0	45.0	50.0	-	
IW 6	9-Dec-02	MCE	2		50.0	45.0	50.0	40	
IW 7	9-Dec-02	MCE	2		50.0	45.0	50.0	42	
IW 8	9-Dec-02	MCE	2		50.0	45.0	50.0	39	
IW 9	9-Dec-02	MCE	2		50.0	45.0	50.0	39	
IW 10	9-Dec-02	MCE	2		50.0	45.0	50.0	39	

All wells constructed of poly vinyl chloride (PVC) unless otherwise noted in comments.

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table VI: Soil Gas Samples Laboratory Analytical Results
VPs 1 and 2, 9 April and 9 June 2009
Sunoco Service Station (DUNS No.: 0005-1078)
2899 Holme Avenue, Philadelphia, Pennsylvania
All Results are Reported in mg/m^3

	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Naphthalene	Cumene
Near-Source Residential Indoor Air Criteria mg/m^3	**0.62**	**1,000**	**1.9**	**21.0**	**19**	**0.140**	**83**
Near-Source Non-Residential Indoor Air Criteria mg/m^3	**16**	**22,000**	**49**	**440**	**470**	**3.6**	**1,800**
Sub-Slab Residential Indoor Air Criteria mg/m^3	**0.12**	**200**	**0.37**	**4**	**3.6**	**0.028**	**16**
Sub-Slab Non-Residential Indoor Air Criteria mg/m^3	**2**	**2,800**	**6.3**	**56**	**61**	**0.46**	**220**

VP 1

Date	Benzene	Toluene	Ethylbenzene	m/p-xylenes	o-xylenes	MTBE	Naphthalene	Cumene
9-Apr-2009	<0.0032	0.0082	<0.0043	<0.0043	<0.0043	<0.0036	<0.0052	<0.0049
9-Jun-2009	0.0049	0.018	<0.0043	0.013	0.0047	<0.0036	<0.0052	<0.0049

VP 2

Date	Benzene	Toluene	Ethylbenzene	m/p-xylenes	o-xylenes	MTBE	Naphthalene	Cumene
9-Apr-2009	0.013	0.083	0.0047	0.015	0.0045	0.0056	<0.0052	<0.0049
9-Jun-2009	<0.0032	0.0079	<0.0043	0.0058	<0.0043	<0.0036	<0.0052	<0.0049

*Samples for BTEX, MTBE, naphthalene and cumene were collected via a Summa Canister, analyzed by EPA TO15/Naphthalene

**Indoor air criteria and concentrations from Table 3 of Land Recycling Program, Technical Guidance Manual- Section IV.A.4 on Vapor Intrusion into buildings from Groundwater and Soil under ACT 2 Statewide Health Standard, PADEP, 24 January 2004

Note: Total xylenes calculated as the sum of o-xylenes and m/p-xylenes.

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ENVIRONMENTAL, INC.

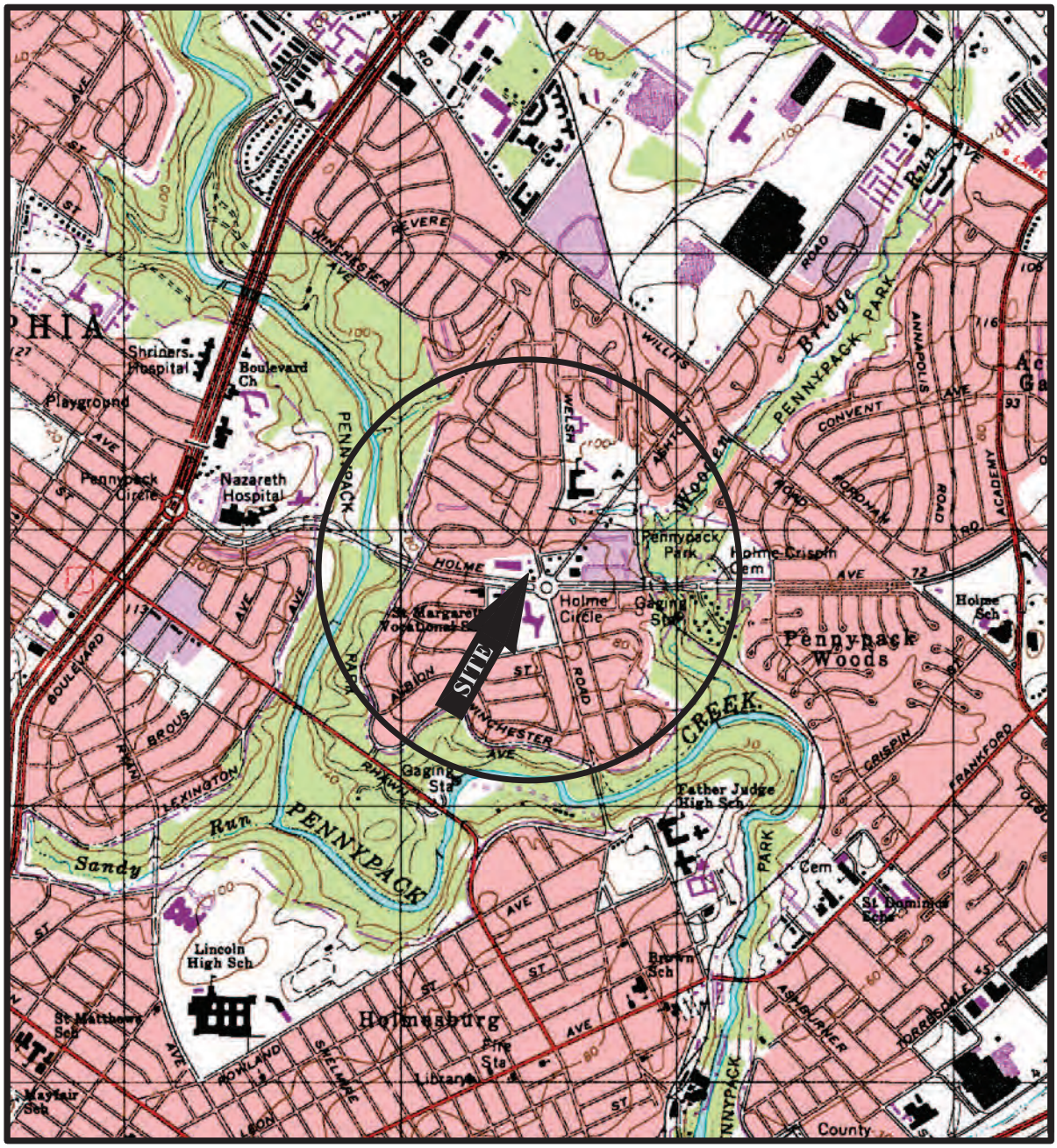


FIGURE I
SITE LOCATION
SUNOCO SERVICE STATION
2899 HOLME AVEUNE
PHILADELPHIA, PENNSYLVANIA

SCALE IN FEET

00 2000 4000

SOURCE: USGS. FRANKFORD, PA
QUADRANGLE. 1967
PHOTOREVISED 1983

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.

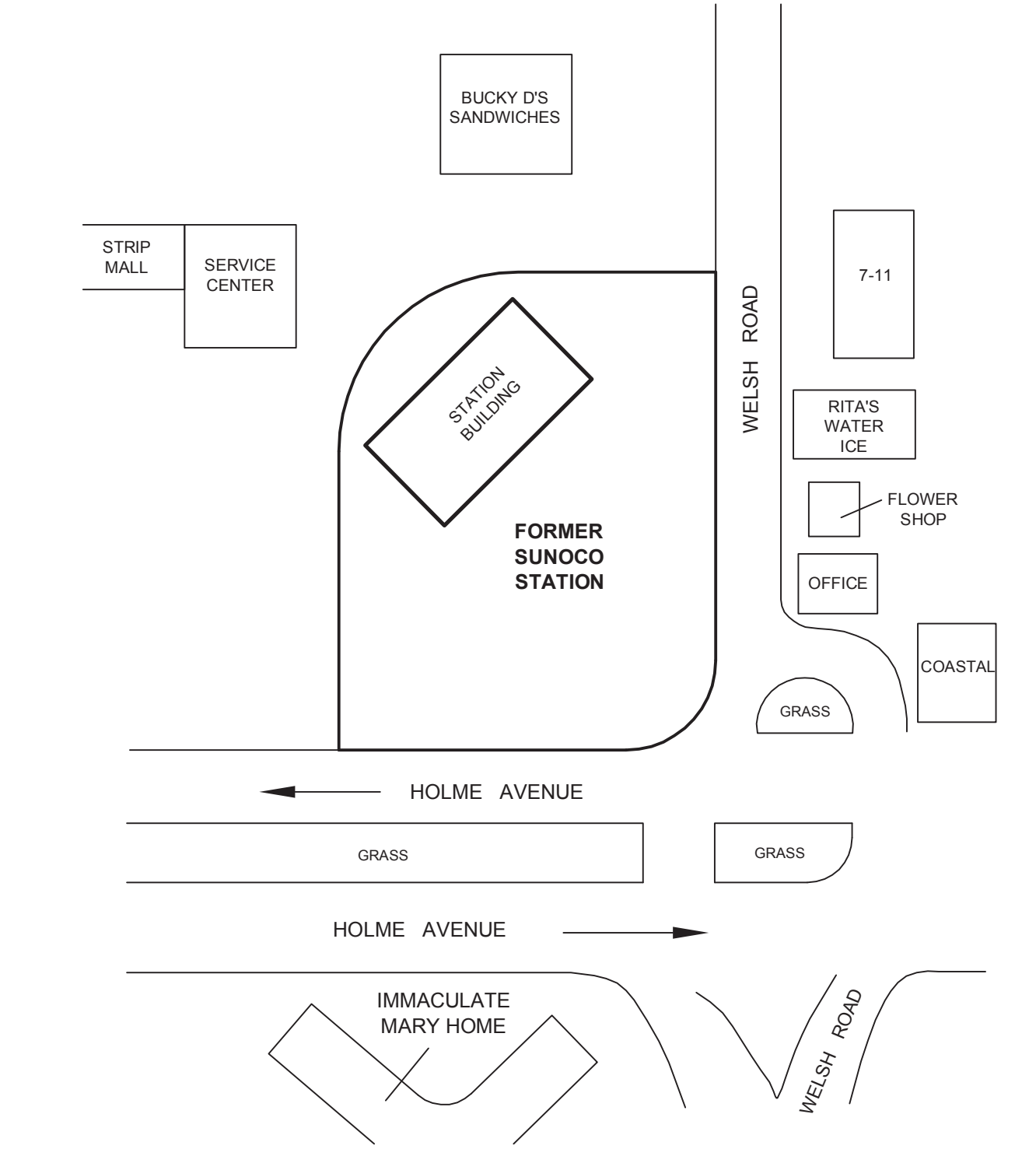
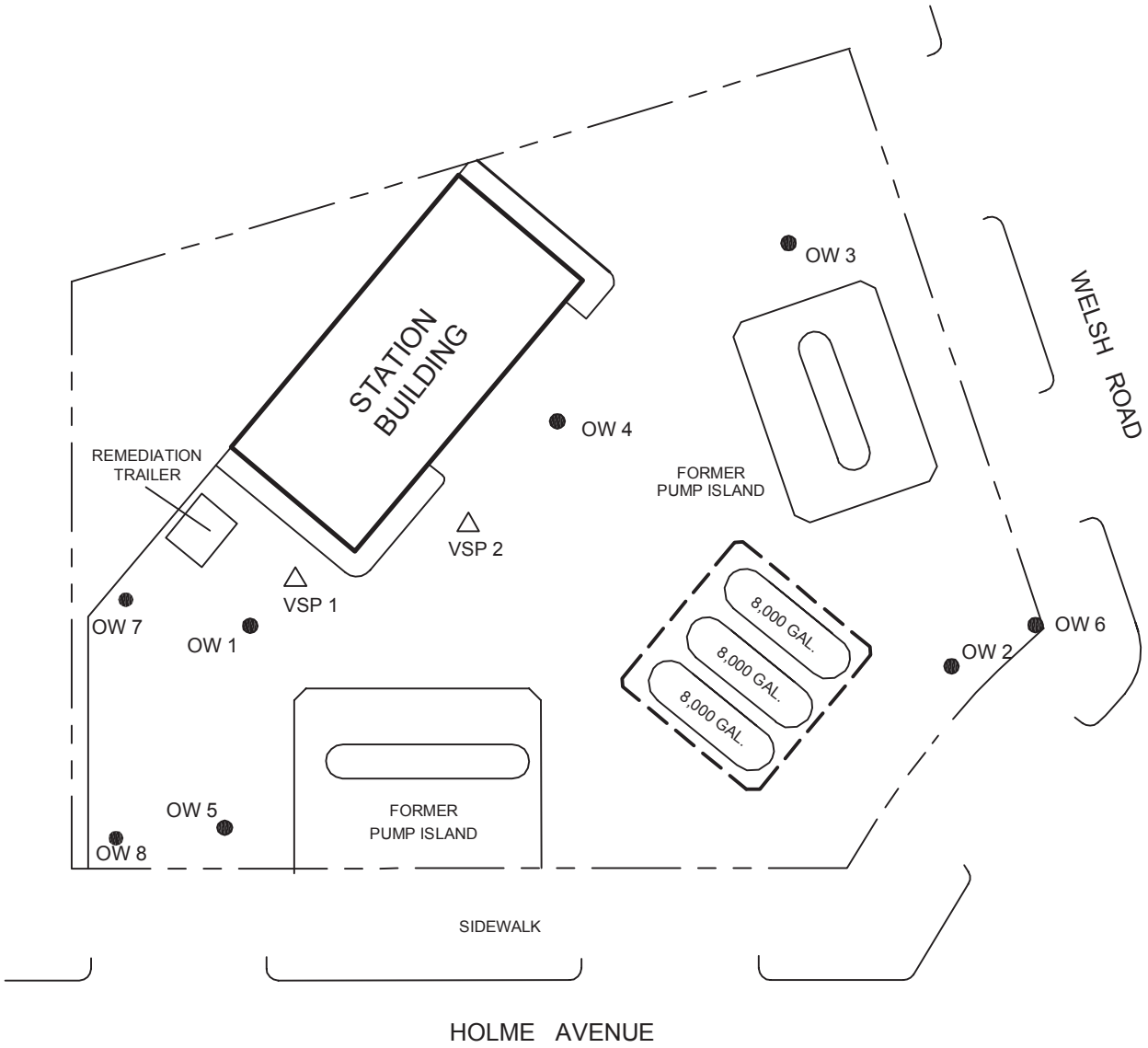


FIGURE II
SURROUNDING PROPERTIES
FORMER SUNOCO SERVICE STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

NOT TO SCALE

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.



● OBSERVATION WELL

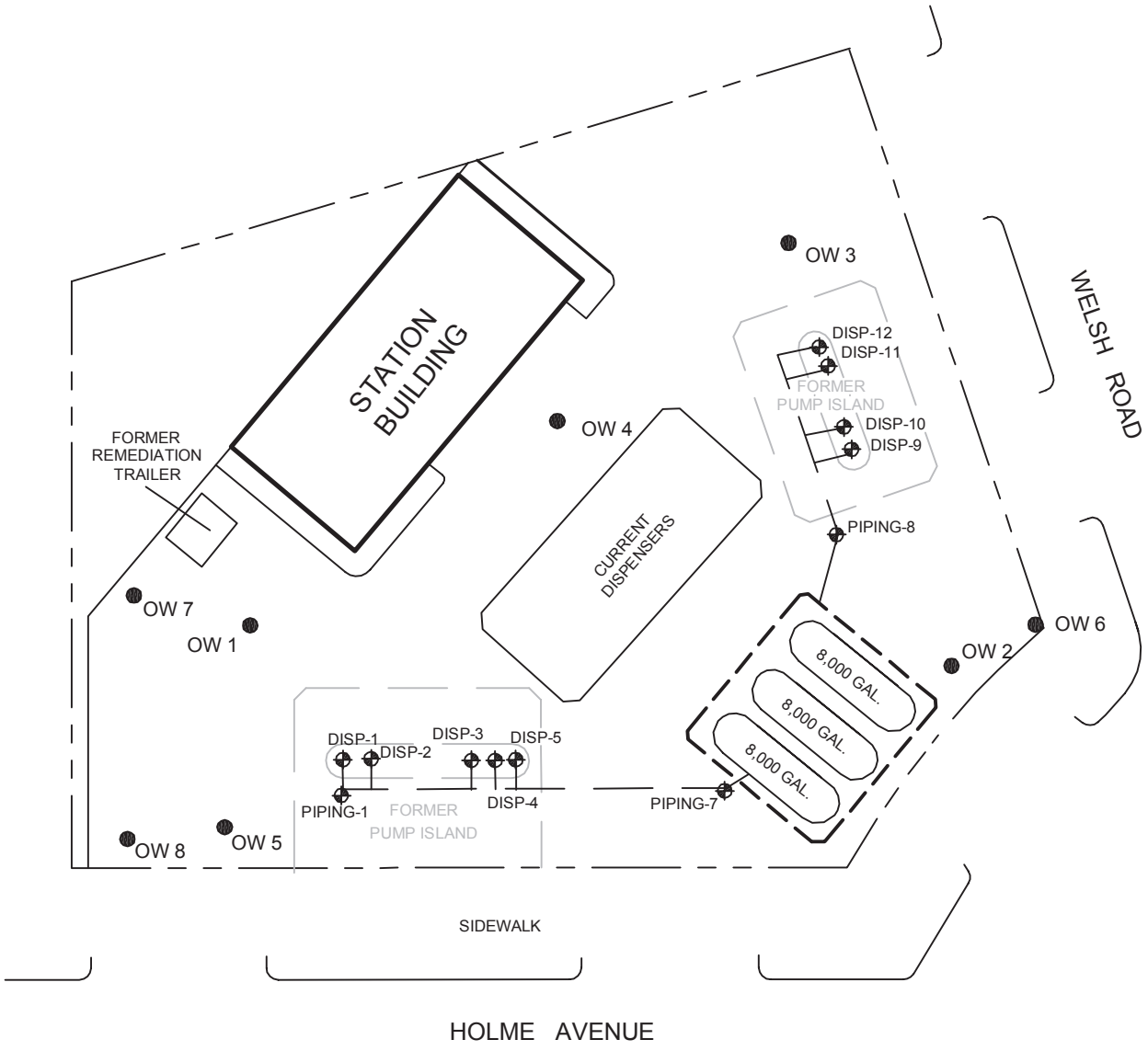
△ SOIL VAPOR SAMPLING POINT

APPROXIMATE SCALE IN FEET

0 30

FIGURE III
SITE PLAN
FORMER SUNOCO SERVICE STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.



OBSERVATION WELL

APPROXIMATE SCALE IN FEET

0 30

FIGURE IVa
HISTORIC, POST-DISPENSER UPGRADING SOIL SAMPLING LOCATIONS - 23 DECEMBER 1997
FORMER SUNOCO SERVICE STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.

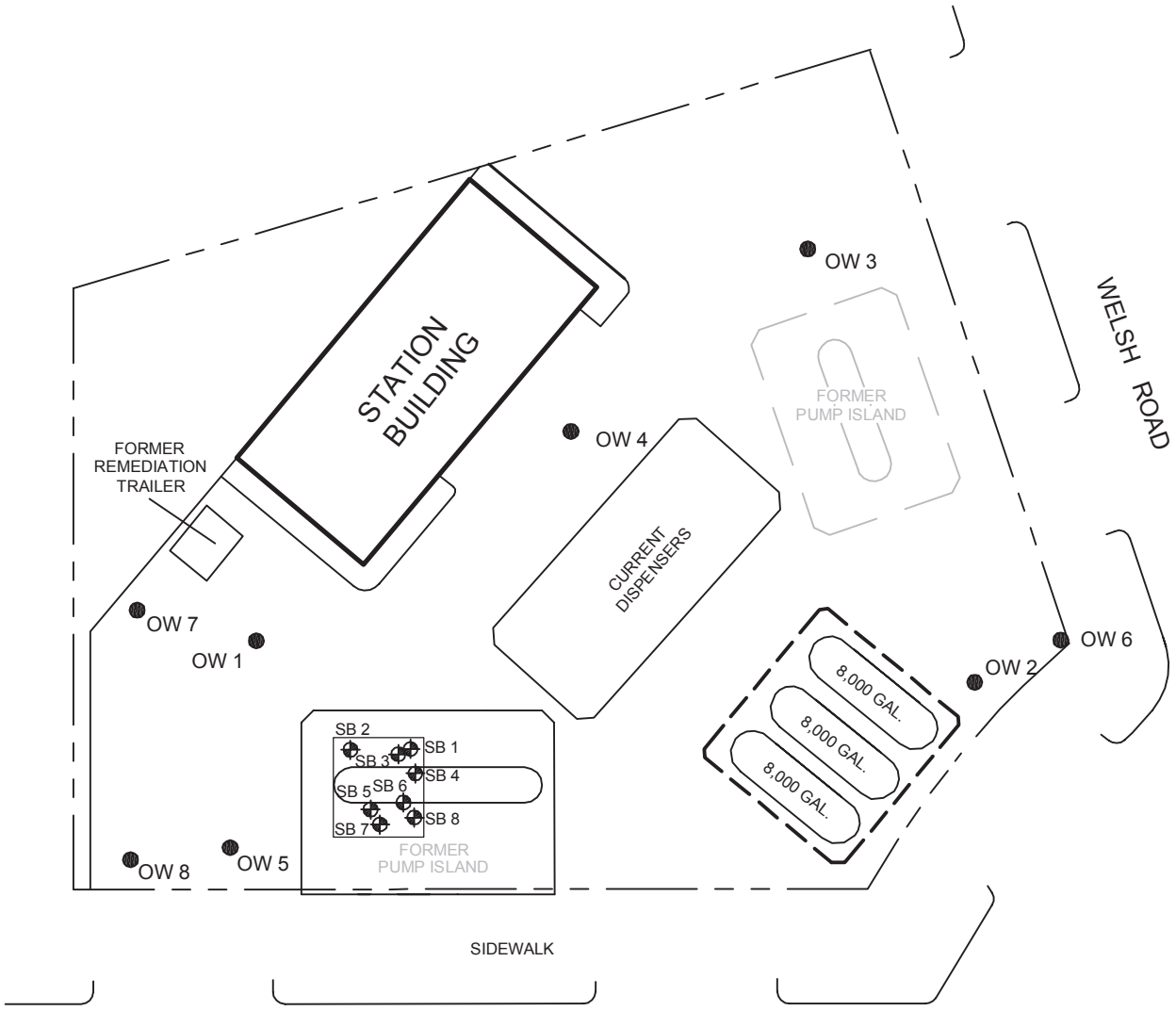


FIGURE IVb
26 MARCH 2009 SYSTEMATIC
RANDOM SOIL SAMPLE LOCATIONS
FORMER SUNOCO SERVICE STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

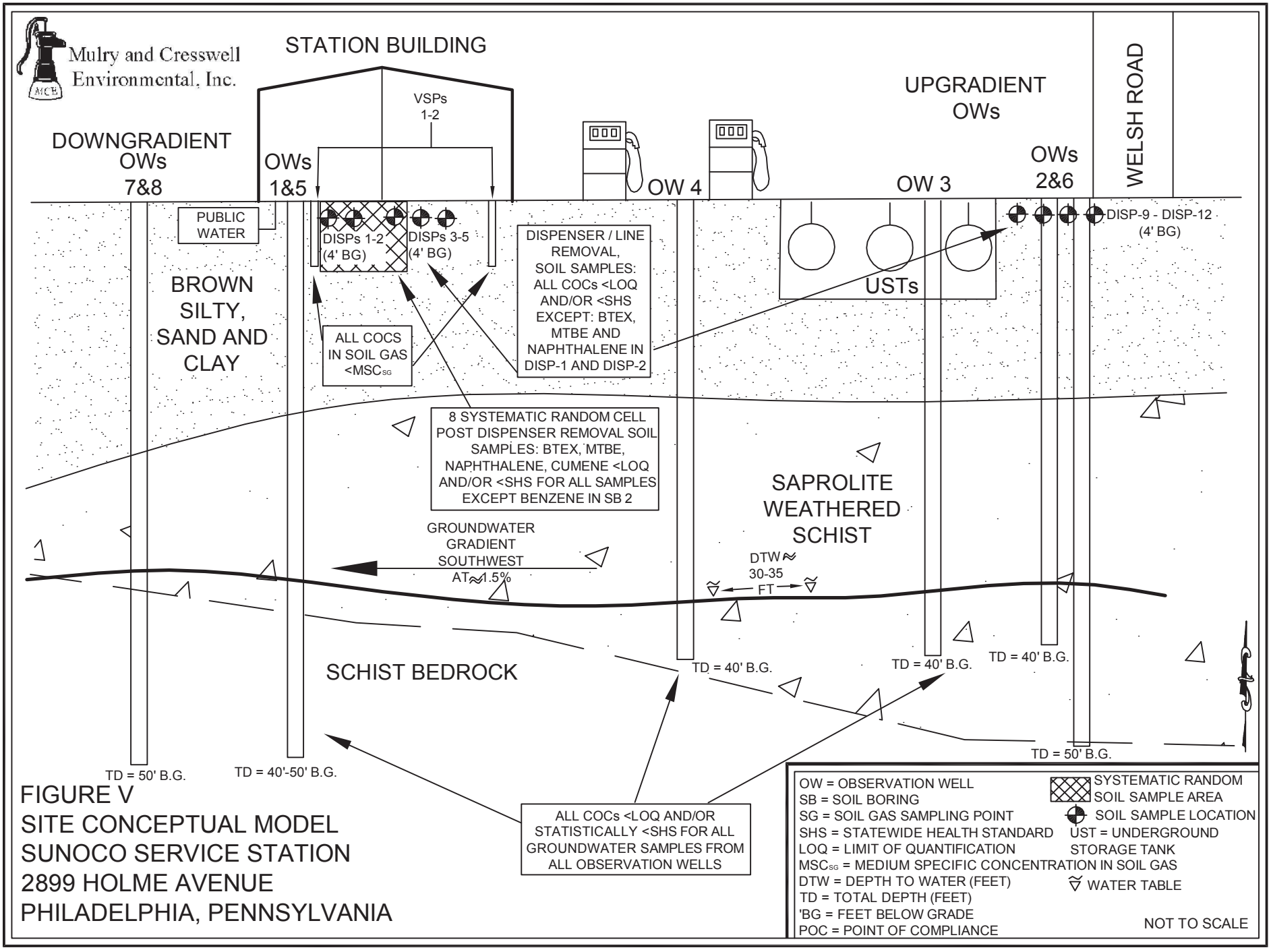
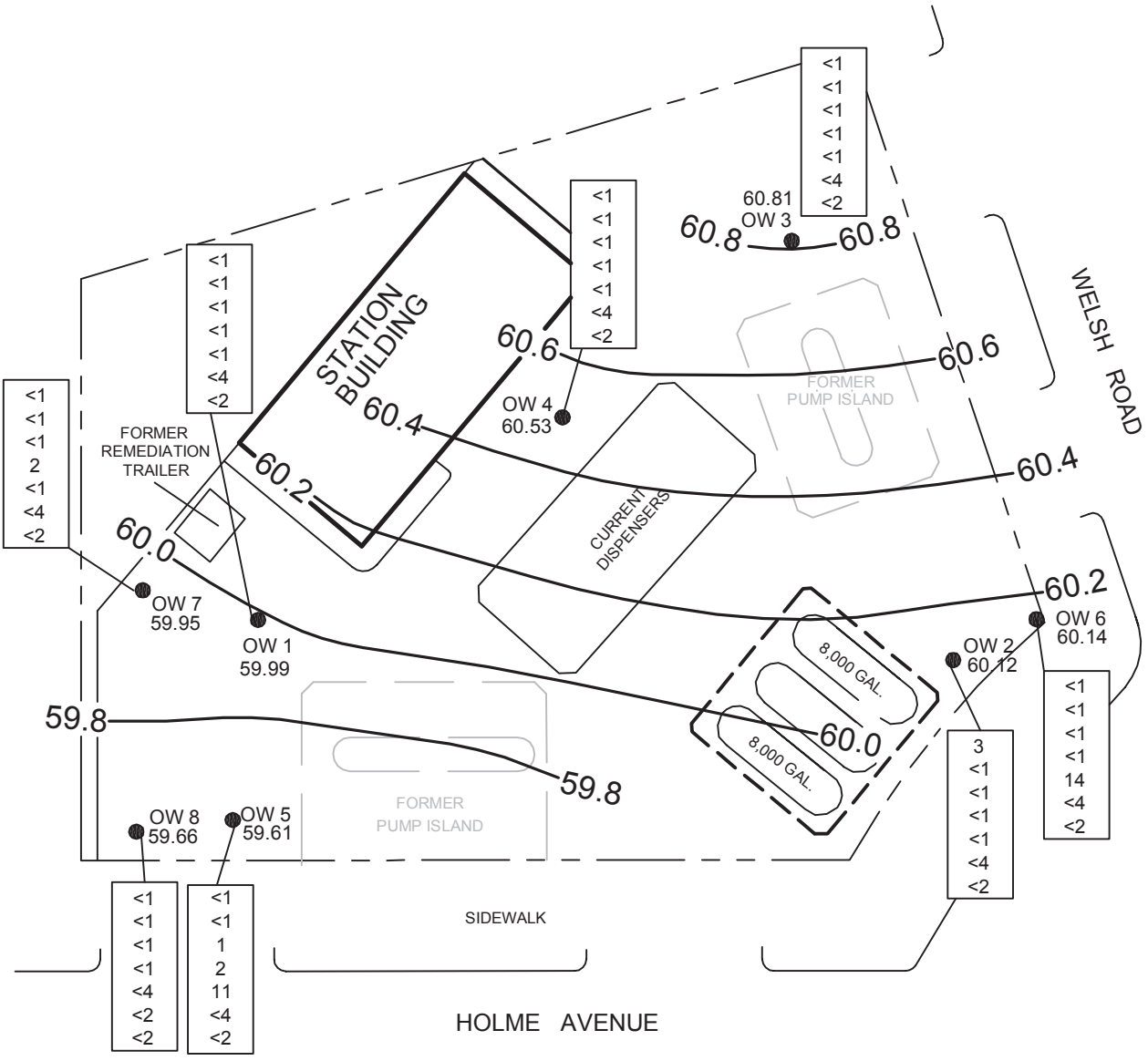


FIGURE V
SITE CONCEPTUAL MODEL
SUNOCO SERVICE STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.



OBSERVATION WELL

<1	= BENZENE (µg/l)
<1	= TOLUENE (µg/l)
1	= ETHYLBENZENE (µg/l)
2	= TOTAL XYLENES (µg/l)
11	= MTBE (µg/l)
<4	= NAPHTHALENE (µg/l)
<2	= CUMENE (µg/l)

APPROXIMATE SCALE IN FEET

0 30

FIGURE VIa
WATER TABLE ELEVATION (FEET) AND
GROUNDWATER ANALYTICAL RESULTS
17 JULY 2017
SUNOCO SERVICE STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.

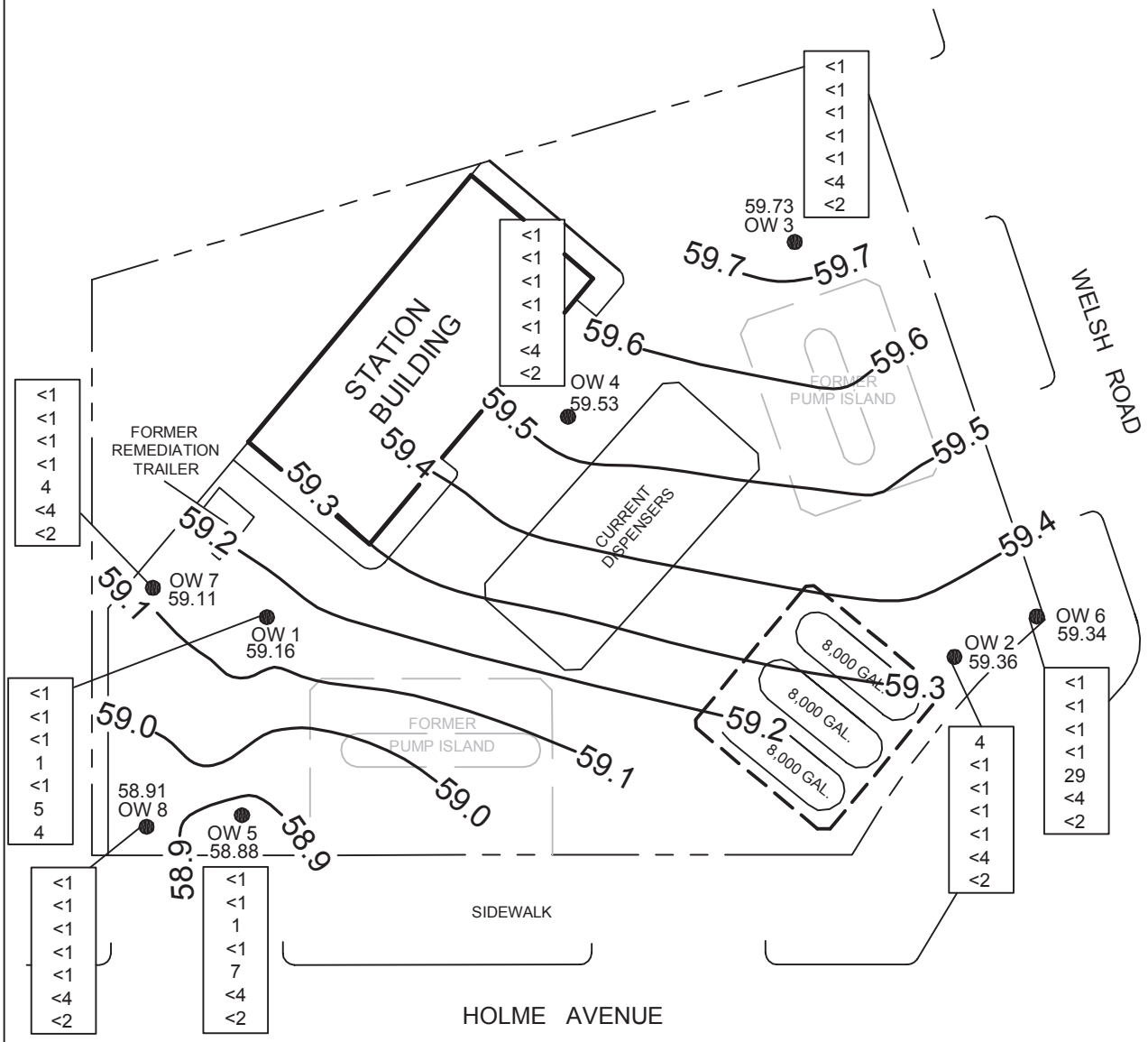


FIGURE VIb
WATER TABLE ELEVATION (FEET) AND
GROUNDWATER ANALYTICAL RESULTS
11 OCTOBER 2017
SUNOCO SERVICE STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

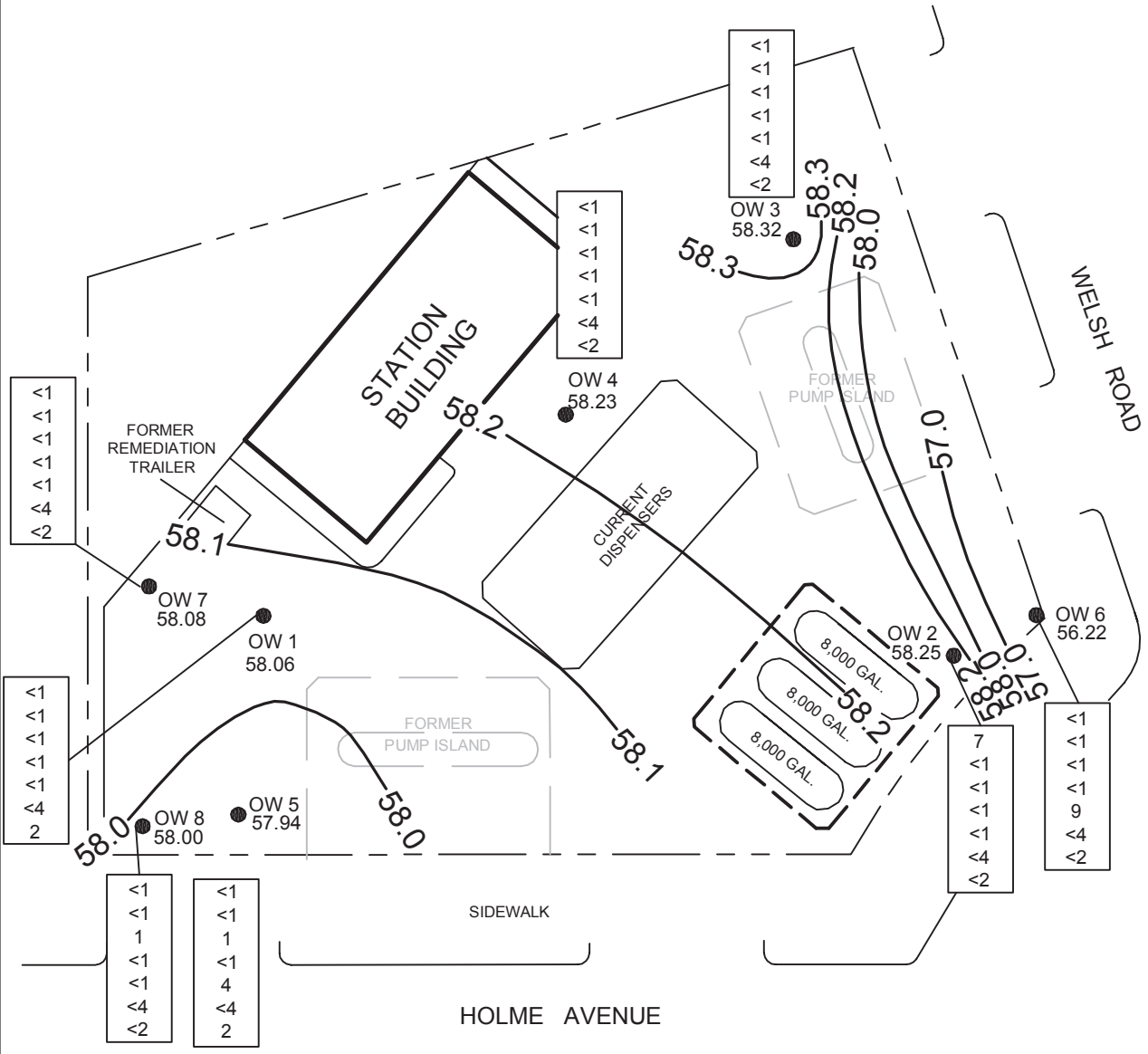
● OBSERVATION WELL

4	= BENZENE (µg/l)
<1	= TOLUENE (µg/l)
<1	= ETHYLBENZENE (µg/l)
<1	= TOTAL XYLENES (µg/l)
<1	= MTBE (µg/l)
<4	= NAPHTHALENE (µg/l)
<2	= CUMENE (µg/l)

APPROXIMATE SCALE IN FEET

0 30

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.



● OBSERVATION WELL

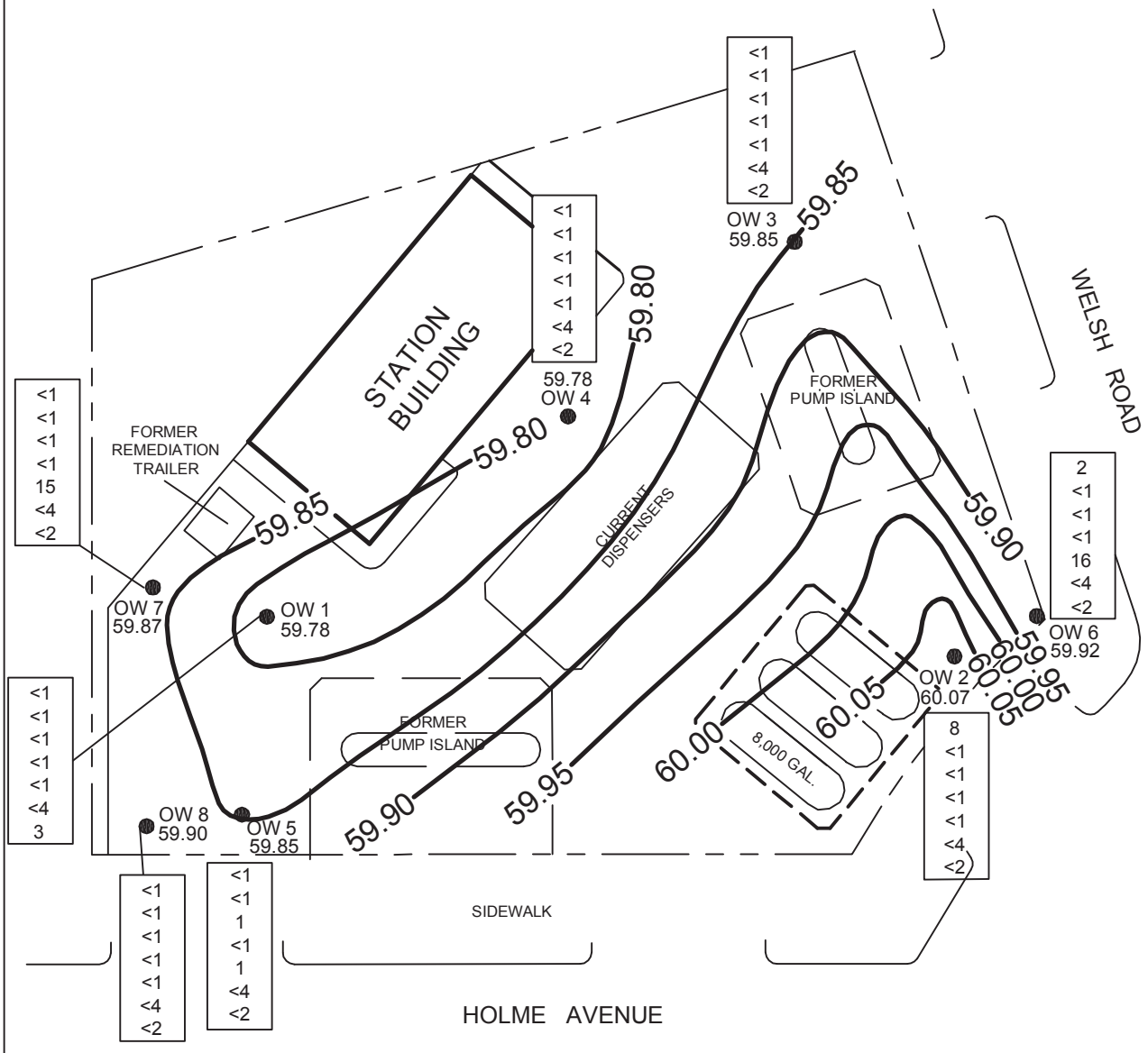
<1	= BENZENE (µg/l)
<1	= TOLUENE (µg/l)
<1	= ETHYLBENZENE (µg/l)
<1	= TOTAL XYLENES (µg/l)
<1	= MTBE (µg/l)
<4	= NAPHTHALENE (µg/l)
2	= CUMENE (µg/l)

APPROXIMATE SCALE IN FEET

0 30

FIGURE VIc
WATER TABLE ELEVATION (FEET) AND GROUNDWATER ANALYTICAL RESULTS
19 JANUARY 2018
SUNOCO SERVICE STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.



● OBSERVATION WELL

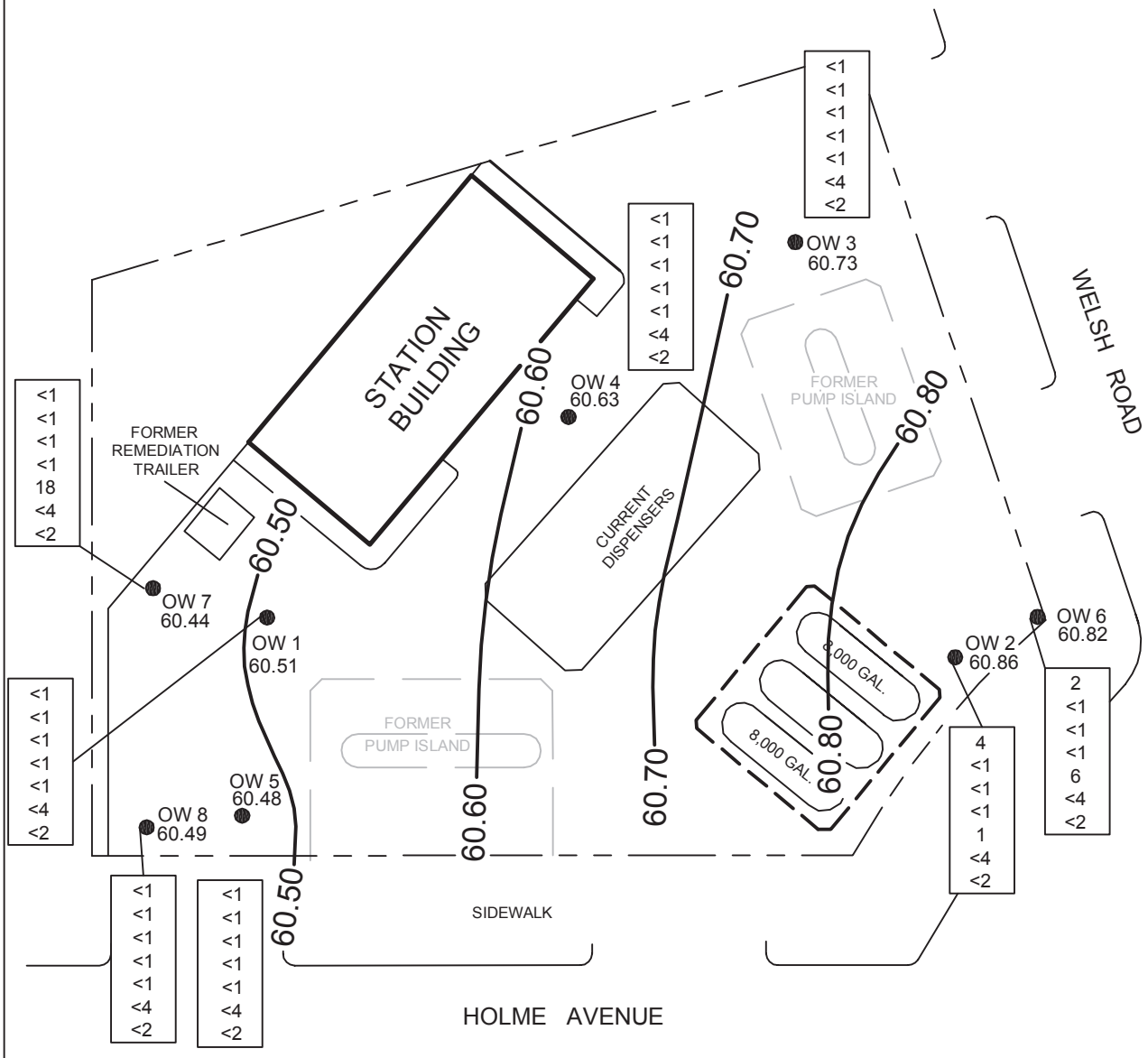
<1	= BENZENE (µg/l)
<1	= TOLUENE (µg/l)
<1	= ETHYLBENZENE (µg/l)
<1	= TOTAL XYLENES (µg/l)
<1	= MTBE (µg/l)
<4	= NAPHTHALENE (µg/l)
3	= CUMENE (µg/l)

APPROXIMATE SCALE IN FEET

0 30

FIGURE VId
WATER TABLE ELEVATION (FEET) AND GROUNDWATER ANALYTICAL RESULTS
23 APRIL 2018
SUNOCO SERVICE STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.



OBSERVATION WELL

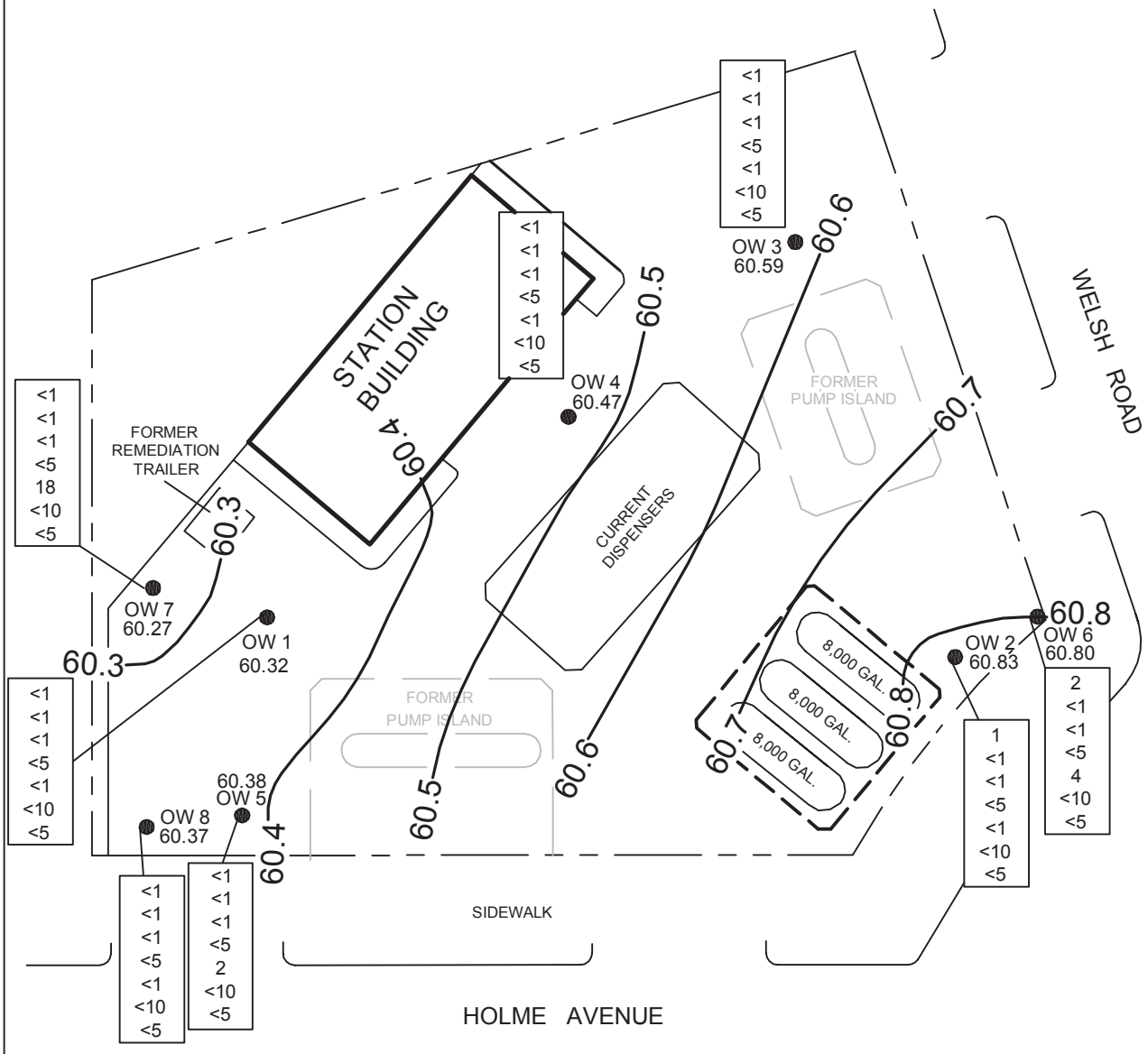
2	= BENZENE (µg/l)
<1	= TOLUENE (µg/l)
<1	= ETHYLBENZENE (µg/l)
5	= TOTAL XYLENES (µg/l)
3	= MTBE (µg/l)
10	= NAPHTHALENE (µg/l)
4	= CUMENE (µg/l)

APPROXIMATE SCALE IN FEET

0 30

FIGURE VIe
WATER TABLE ELEVATION (FEET) AND GROUNDWATER ANALYTICAL RESULTS
11 JULY 2018
SUNOCO SERVICE STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.



OBSERVATION WELL

<1	= BENZENE (µg/l)
<1	= TOLUENE (µg/l)
<1	= ETHYLBENZENE (µg/l)
<5	= TOTAL XYLENES (µg/l)
<1	= MTBE (µg/l)
<10	= NAPHTHALENE (µg/l)
<5	= CUMENE (µg/l)

APPROXIMATE SCALE IN FEET

0 30

FIGURE VIf
WATER TABLE ELEVATION (FEET) AND GROUNDWATER ANALYTICAL RESULTS
16 OCTOBER 2018
SUNOCO SERVICE STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.

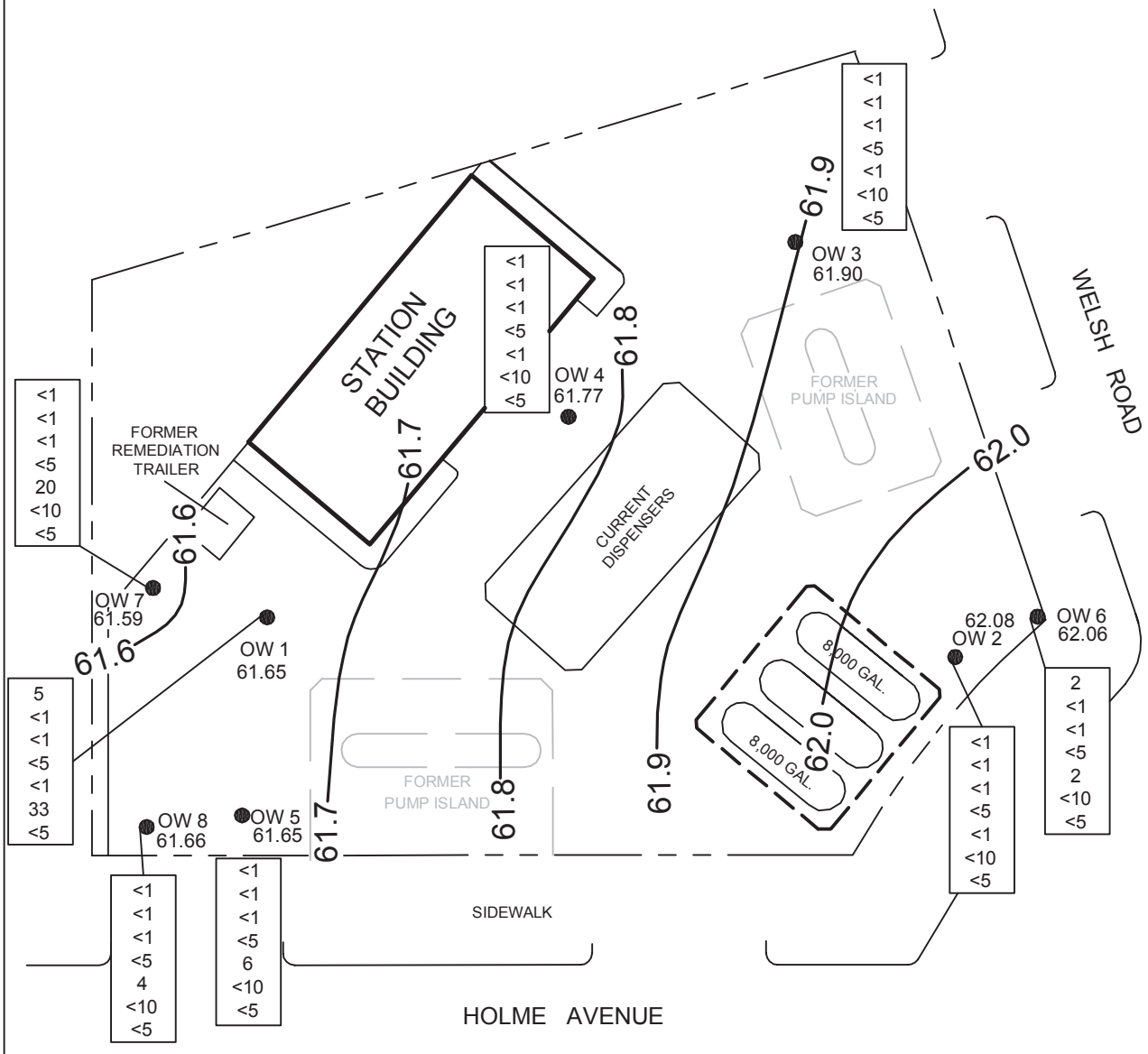


FIGURE VIg
WATER TABLE ELEVATION (FEET) AND
GROUNDWATER ANALYTICAL RESULTS
10 JANUARY 2019
SUNOCO SERVICE STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

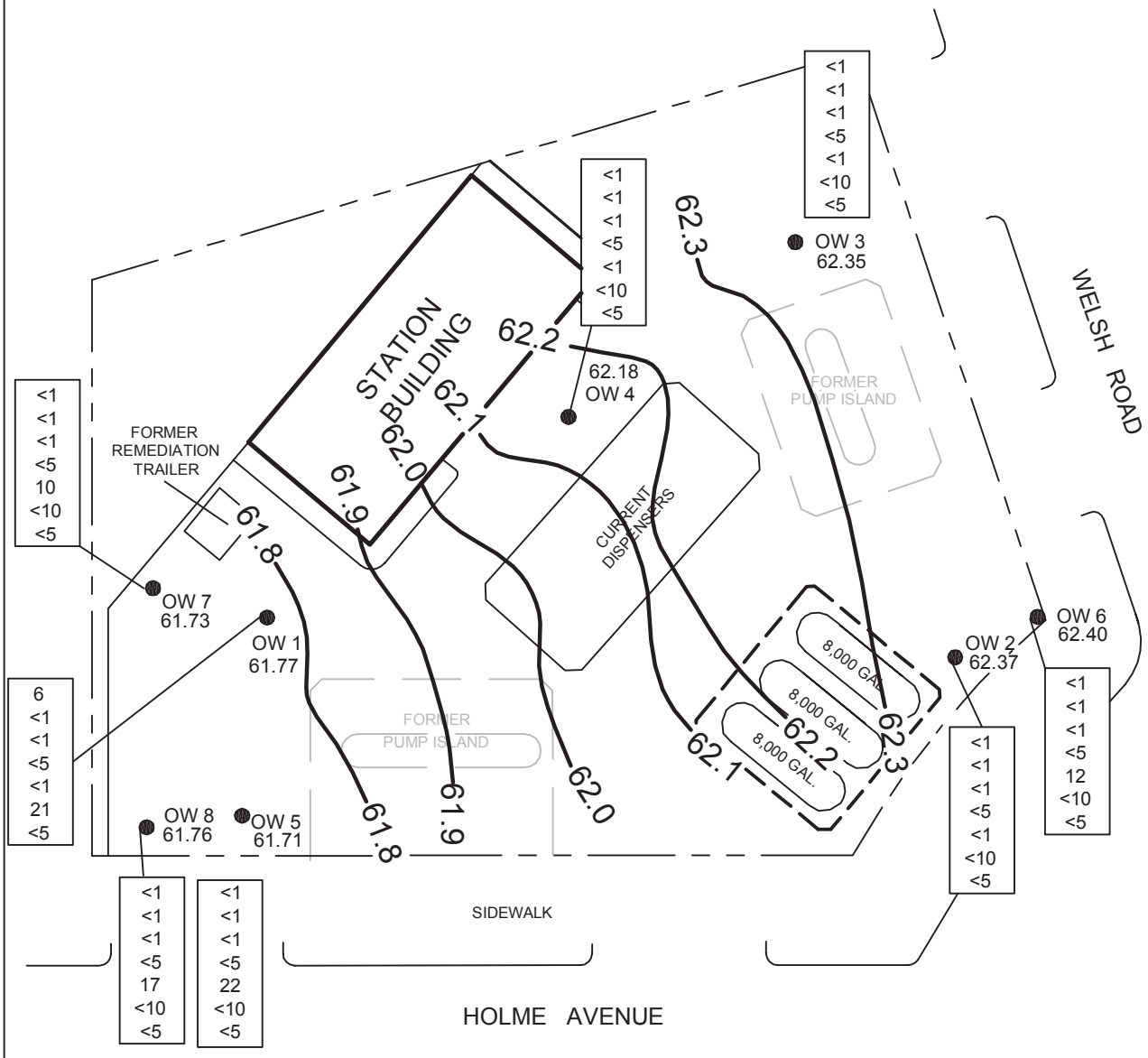
● OBSERVATION WELL

5	= BENZENE (µg/l)
<1	= TOLUENE (µg/l)
<1	= ETHYLBENZENE (µg/l)
<5	= TOTAL XYLENES (µg/l)
<1	= MTBE (µg/l)
33	= NAPHTHALENE (µg/l)
<5	= CUMENE (µg/l)

APPROXIMATE SCALE IN FEET

0 30

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.



OBSERVATION WELL

6	= BENZENE (µg/l)
<1	= TOLUENE (µg/l)
<1	= ETHYLBENZENE (µg/l)
<5	= TOTAL XYLENES (µg/l)
<1	= MTBE (µg/l)
21	= NAPHTHALENE (µg/l)
<5	= CUMENE (µg/l)

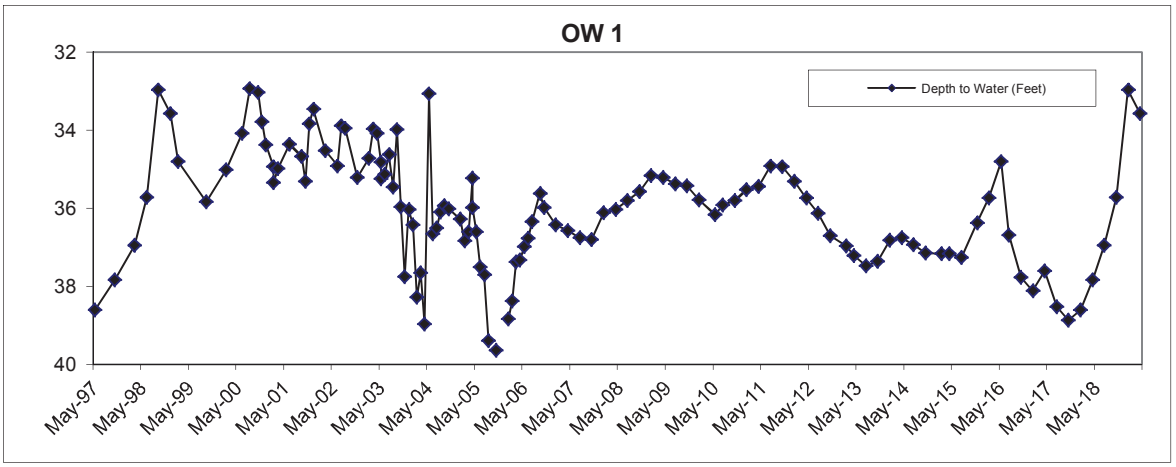
APPROXIMATE SCALE IN FEET

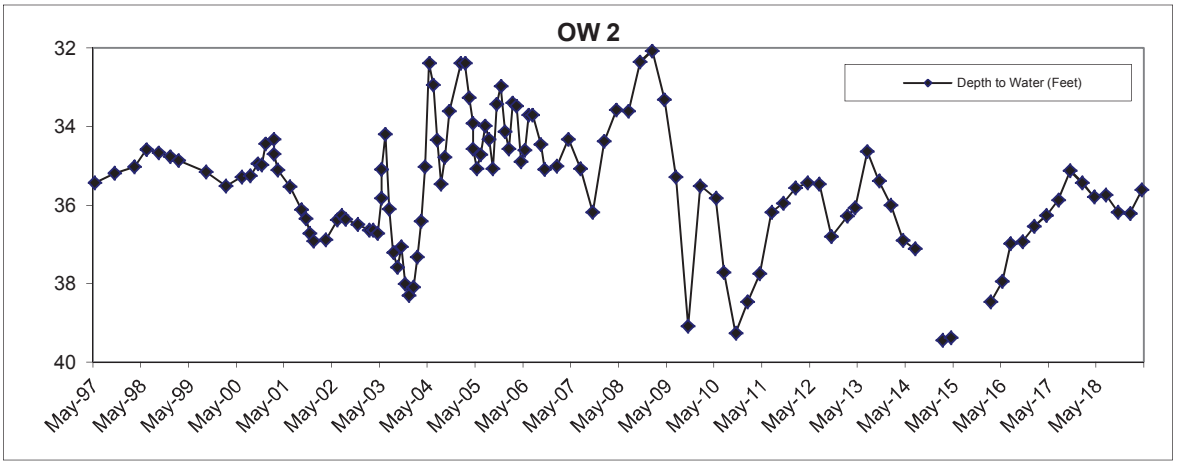
0 30

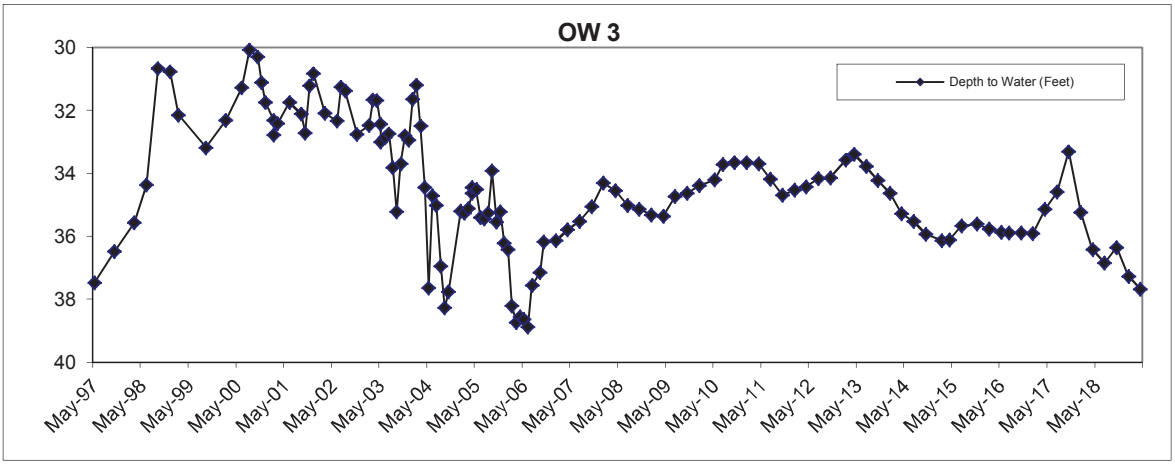
FIGURE VIh
WATER TABLE ELEVATION (FEET) AND GROUNDWATER ANALYTICAL RESULTS
23 APRIL 2019
SUNOCO SERVICE STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Figure VII: Hydrographs for OWs 1-8 (May 1997 - April 2019)
Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA

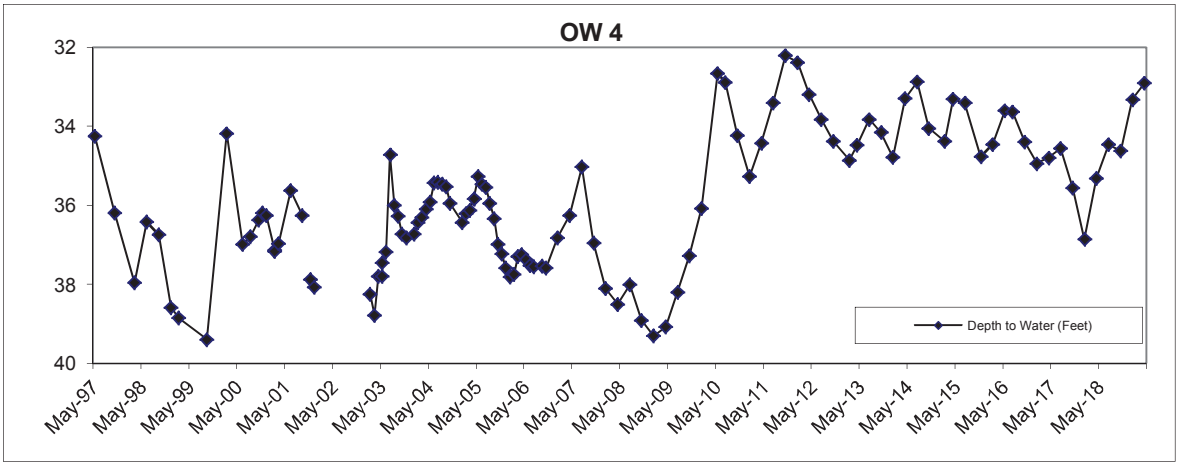


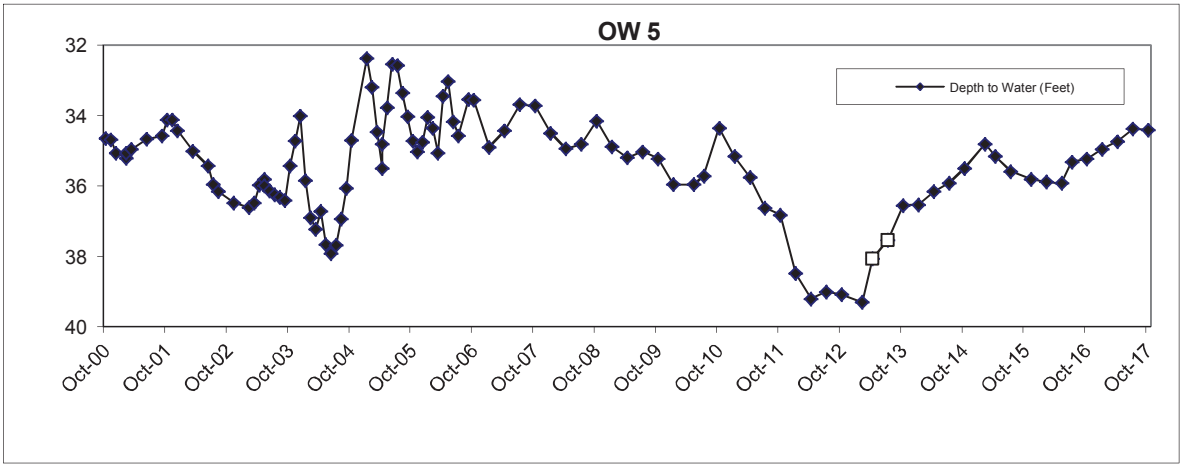


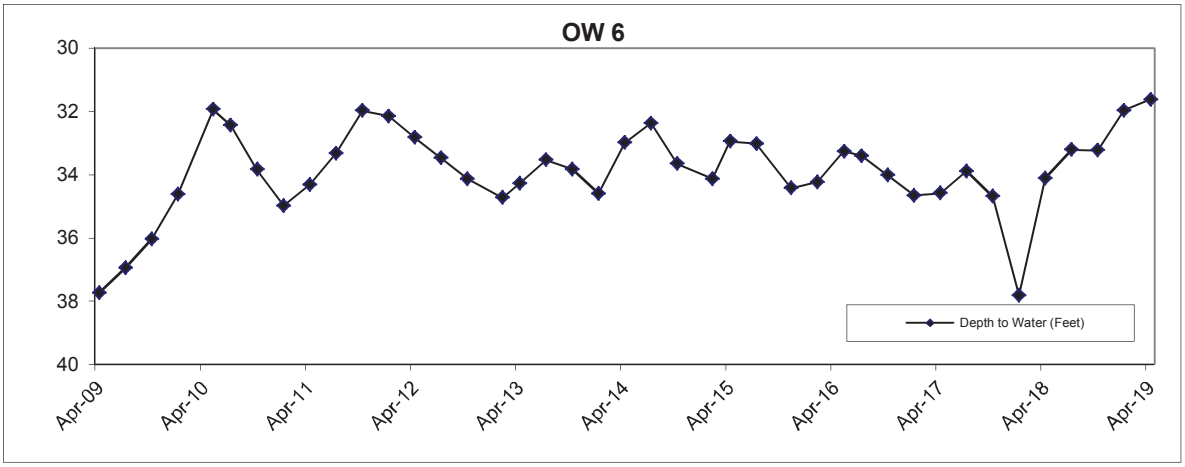


MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Figure VII, continued: Hydrographs for OWs 1-8 (May 1997 - April 2019)
Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA

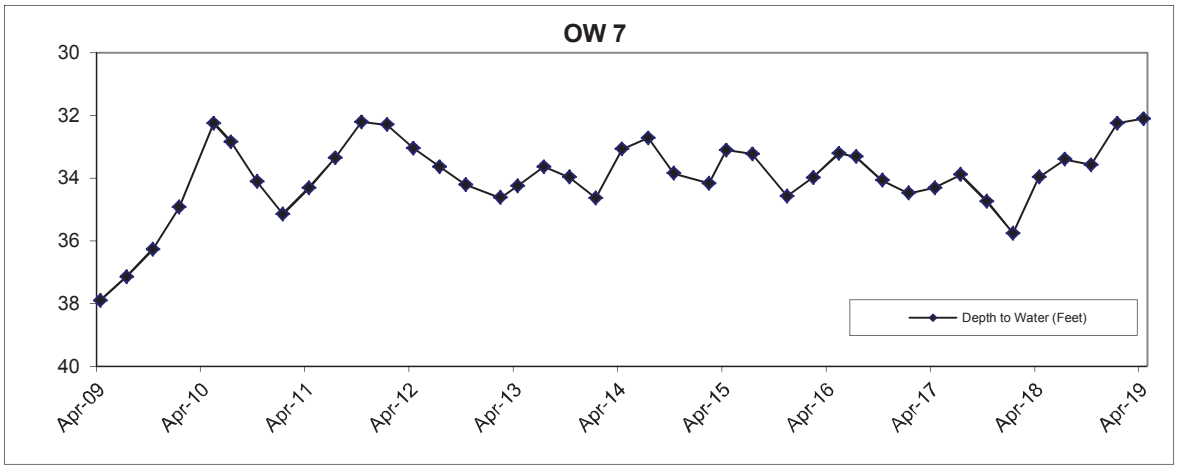


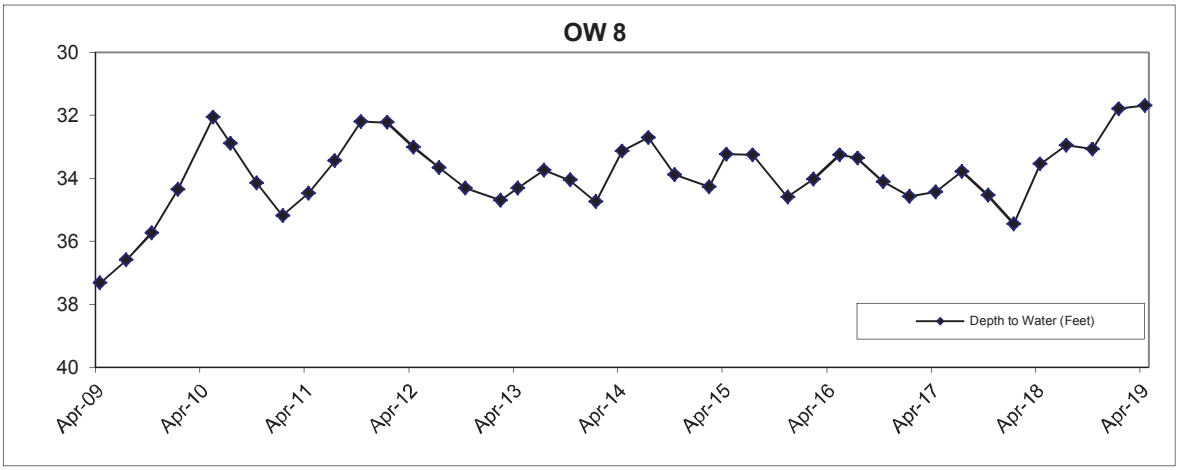




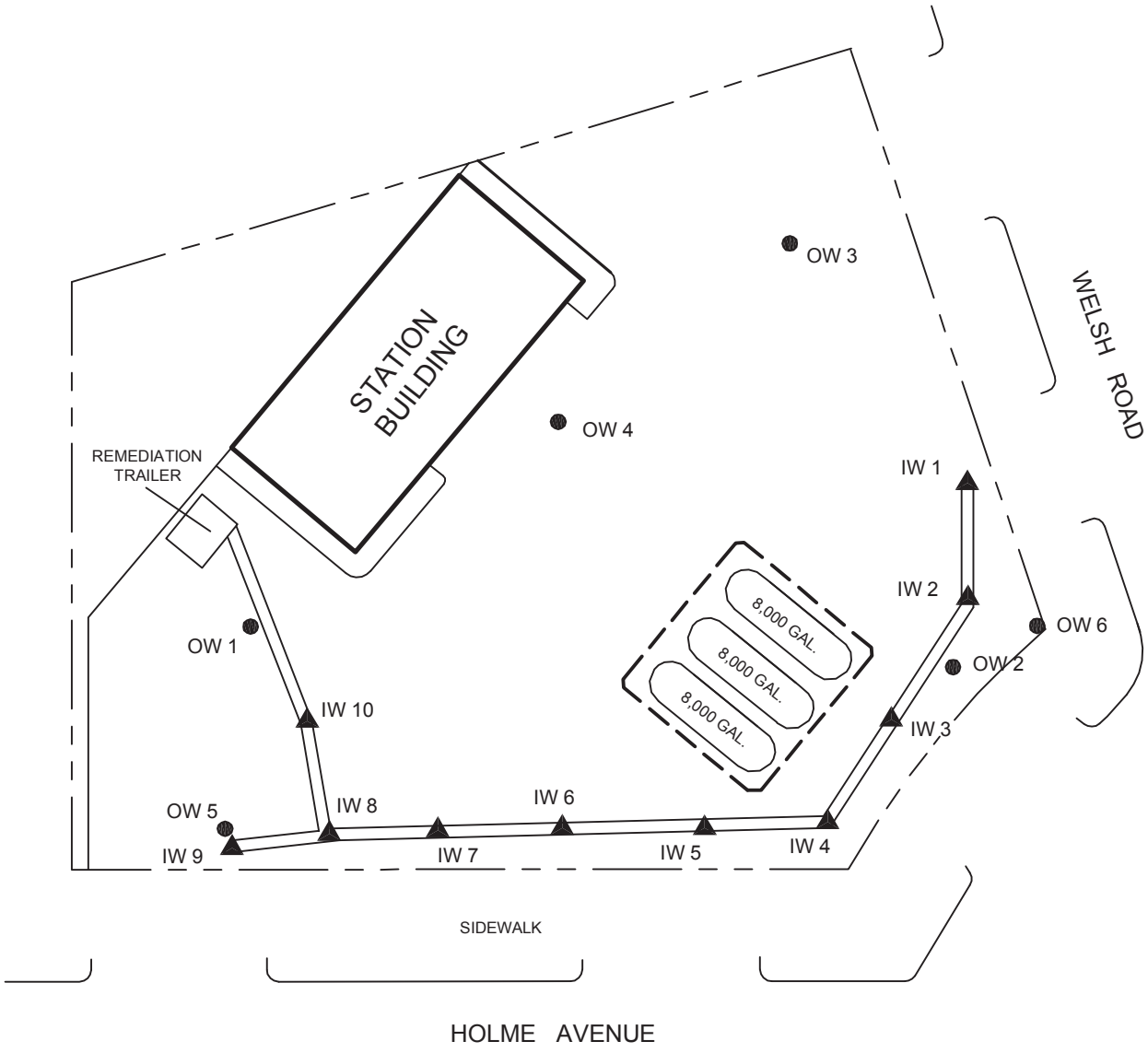
MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Figure VII, continued: Hydrographs for OWs 1-8 (May 1997 - April 2019)
Sunoco Service Station (DUNS # 0005-1078)
2899 Holme Avenue, Philadelphia, PA





MULRY AND CRESSWELL
ENVIRONMENTAL, INC.



● OBSERVATION WELL
▲ PROPOSED OXYGEN INJECTION POINT

APPROXIMATE SCALE IN FEET

0 30

FIGURE VIII
OXYGEN INJECTION
REMEDIATION SYSTEM LAYOUT
FORMER SUNOCO SERVICE STATION
2899 HOLME AVENUE
PHILADELPHIA, PENNSYLVANIA

APPENDIX A

Soil Samples Laboratory Analytical Reports

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories
A division of Thermo Analytical Inc.

For Lancaster Laboratories use only
Acct. # 8475 Sample # 2709535-38

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: Sun-GES Acct. #: 8475
2879 Holme Ave. Phila., PA.
Project Name/#: Sun Welsh & Holmes PWSID #:
Project Manager: Andy Markoski P.O.#:
Sampler: Brian S. Richter Quote #:
Name of state where samples were collected: PA

(2) Sample Identification | Date Collected | Time Collected | (3) Grab | Composite | (4) Matrix: Soil | Water (Potable / NPDES) | Other | Total # of Containers | (5) Analyses Requested: BTEX 8020/MTBE | 8270 | Remarks | For lab use only: Temperature of samples upon receipt (if requested)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Other	Total # of Containers	BTEX 8020/MTBE	8270	Remarks	Temperature of samples upon receipt (if requested)
MW-1 (28'-30')	5/12/97	0945	X		X			2	X	X	2-125ml Jars	3.2°C
MW-2 (18'-20')		1125	X		X			2	X	X		
MW-3 (28'-30')		1345	X		X			2	X	X		
MW-4 (28'-30')		1550	X		X			2	X	X		5/13/97

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax
Phone #: Fax #:

(8) **Data Package Options** (please circle if requested)
QC Summary Type VI (Raw Data)
Type I (Tier I) GLP
Type II (Tier II) Other
Type III (NJ Red. Del.)
Type IV (CLP)

SDG Complete? Yes No
Site-specific QC required? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal Chain of Custody required? Yes No

Relinquished by:	Date	Time	Received by:	Date	Time
	5/13/97	1800	Refrigerator	5/13/97	1800
Locked Refrig	5-13-97	1900		5/13/97	1800
	5/13/97	1930			

Andy Markoski 5/14/97

Lancaster Laboratories
A division of Thermo Analytical Inc.

MAY 30 1997

LLI Sample No. SW 2709535
Collected: 5/12/97 at 09:45 by BR

Submitted: 5/13/97 Reported: 5/28/97
Discard: 6/12/97

MW-1 (28-30') Grab Soil Sample

SUN: 2899 Holme Ave. - Philadelphia, PA

Account No: 08475
SUN: Groundwater & Enviro. Svc
410 Eagleview Blvd.
Suite 110
Exton PA 19341

P.O. 2899 HOLME AVE
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	AS RECEIVED UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
1198	Acid Extractables SW846/8270					
1186	2-chlorophenol	N.D.	330.	ug/kg	N.D.	420.
1185	phenol	N.D.	330.	ug/kg	N.D.	420.
3746	2-nitrophenol	N.D.	330.	ug/kg	N.D.	420.
3747	2,4-dimethylphenol	N.D.	330.	ug/kg	N.D.	420.
3748	2,4-dichlorophenol	N.D.	330.	ug/kg	N.D.	420.
1190	4-chloro-3-methylphenol	N.D.	330.	ug/kg	N.D.	420.
3749	2,4,6-trichlorophenol	N.D.	330.	ug/kg	N.D.	420.
3750	2,4-dinitrophenol	N.D.	830.	ug/kg	N.D.	1,000.
1192	4-nitrophenol	N.D.	830.	ug/kg	N.D.	1,000.
3751	4,6-dinitro-2-methylphenol	N.D.	830.	ug/kg	N.D.	1,000.
1194	pentachlorophenol	N.D.	830.	ug/kg	N.D.	1,000.
1199	Base Neutrals (SW846/8270)					
3752	N-nitrosodimethylamine	N.D.	330.	ug/kg	N.D.	420.
3753	bis (2-chloroethyl) ether	N.D.	330.	ug/kg	N.D.	420.
3754	1,3-dichlorobenzene	N.D.	330.	ug/kg	N.D.	420.
1187	1,4-dichlorobenzene	N.D.	330.	ug/kg	N.D.	420.
3755	1,2-dichlorobenzene	N.D.	330.	ug/kg	N.D.	420.
3756	bis (2-chloroisopropyl) ether	N.D.	330.	ug/kg	N.D.	420.
3757	hexachloroethane	N.D.	330.	ug/kg	N.D.	420.
1188	N-nitrosodi-n-propylamine	N.D.	330.	ug/kg	N.D.	420.
3758	nitrobenzene	N.D.	330.	ug/kg	N.D.	420.
3759	isophorone	N.D.	330.	ug/kg	N.D.	420.
3760	bis (2-chloroethoxy) methane	N.D.	330.	ug/kg	N.D.	420.
1189	1,2,4-trichlorobenzene	N.D.	330.	ug/kg	N.D.	420.
3761	naphthalene	N.D.	330.	ug/kg	N.D.	420.
3762	hexachlorobutadiene	N.D.	330.	ug/kg	N.D.	420.
3763	hexachlorocyclopentadiene	N.D.	330.	ug/kg	N.D.	420.
3764	2-chloronaphthalene	N.D.	330.	ug/kg	N.D.	420.
3765	acenaphthylene	N.D.	330.	ug/kg	N.D.	420.
3766	dimethyl phthalate	N.D.	330.	ug/kg	N.D.	420.
3767	2,6-dinitrotoluene	N.D.	330.	ug/kg	N.D.	420.
1191	acenaphthene	N.D.	330.	ug/kg	N.D.	420.
1193	2,4-dinitrotoluene	N.D.	330.	ug/kg	N.D.	420.
3768	fluorene	N.D.	330.	ug/kg	N.D.	420.
3769	4-chlorophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	420.

1 COPY TO SUN:Groundwater & Environ Svc ATTN: Mr. Andy Markoski

Questions? Contact your Client Services Representative
Eileen Hostetler at (717) 656-2300
07:36:42 D 0001 4 119586 564815
320 0.00 00032020 ASR000

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2709535
Collected: 5/12/97 at 09:45 by BR

Submitted: 5/13/97 Reported: 5/28/97
Discard: 6/12/97

MW-1 (28-30') Grab Soil Sample

SUN: 2899 Holme Ave. - Philadelphia, PA

Account No: 08475
SUN: Groundwater & Enviro. Svc
410 Eagleview Blvd.
Suite 110
Exton PA 19341

P.O. 2899 HOLME AVE
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
3770	diethyl phthalate	N.D.	330.	ug/kg	N.D.	420.
3771	1,2-diphenylhydrazine	N.D.	330.	ug/kg	N.D.	420.
3772	N-nitrosodiphenylamine	N.D.	330.	ug/kg	N.D.	420.
3773	4-bromophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	420.
3774	hexachlorobenzene	N.D.	330.	ug/kg	N.D.	420.
3775	phenanthrene	N.D.	330.	ug/kg	N.D.	420.

Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.

1200 Base Neutral cont SW846/8270

3776	anthracene	N.D.	330.	ug/kg	N.D.	420.
3777	di-n-butyl phthalate	< 330.	330.	ug/kg	< 420.	420.
3778	fluoranthene	N.D.	330.	ug/kg	N.D.	420.
1195	pyrene	N.D.	330.	ug/kg	N.D.	420.
3779	benzidine	N.D.	3,300.	ug/kg	N.D.	4,200.
3780	butyl benzyl phthalate	N.D.	330.	ug/kg	N.D.	420.
3781	benzo (a) anthracene	N.D.	330.	ug/kg	N.D.	420.
3782	chrysene	N.D.	330.	ug/kg	N.D.	420.
3783	3,3'-dichlorobenzidine	N.D.	670.	ug/kg	N.D.	830.
3784	bis (2-ethylhexyl) phthalate	N.D.	330.	ug/kg	N.D.	420.
3785	di-n-octyl phthalate	N.D.	330.	ug/kg	N.D.	420.
3786	benzo (b) fluoranthene	N.D.	330.	ug/kg	N.D.	420.
3787	benzo (k) fluoranthene	N.D.	330.	ug/kg	N.D.	420.
3788	benzo (a) pyrene	N.D.	330.	ug/kg	N.D.	420.
3789	indeno (1,2,3-cd) pyrene	N.D.	330.	ug/kg	N.D.	420.
3790	dibenz (a,h) anthracene	N.D.	330.	ug/kg	N.D.	420.
3791	benzo (ghi) perylene	N.D.	330.	ug/kg	N.D.	420.

di-n-butylphthalate was detected in the method blank at a concentration of 100. ug/kg. The blank value was not subtracted from the analytical result.

0111	Moisture	19.8	0.50	% by wt.

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

Questions? Contact your Client Services Representative
Eileen Hostetler at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Manager, Volatiles

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2709535
Collected: 5/12/97 at 09:45 by BR

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MW-1 (28-30') Grab Soil Sample

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Suite 110
Exton PA 19341

P.O. 2899 HOLME AVE
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
2464	Methyl tertiary butyl ether	N.D.	20.	ug/kg	N.D.	20.
6175	BTEX Scan (Total Xylenes) Soil					
2603	Benzene	< 5.	5.	ug/kg	< 6.	6.
2604	Toluene	< 5.	5.	ug/kg	< 6.	6.
2606	Ethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5327	Total Xylenes	< 15.	15.	ug/kg	< 19.	19.

LABORATORY CHRONICLE

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	05/19/97 1600	Christine L. Bump
1198	Acid Extractables SW846/8270	SW-846 8270B	1	05/20/97 2052	David J. Evans
1199	Base Neutrals (SW846/8270)	SW-846 8270B	1	05/20/97 2052	David J. Evans
1200	Base Neutral cont SW846/8270	SW-846 8270B	1	05/20/97 2052	David J. Evans
0111	Moisture	EPA 160.3 modified	1	05/16/97 1842	Neelay B. Mehta
2464	Methyl tertiary butyl ether	SW-846 8020A, mod.	1	05/15/97 0704	Stephanie A. Selis
6175	BTEX Scan (Total Xylenes) Soil	SW-846 8020A, mod.	1	05/15/97 0704	Stephanie A. Selis

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Respectfully Submitted
Michele McClarin, B.A.
Manager, Volatiles

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2709536
Collected: 5/12/97 at 11:25 by BR

Submitted: 5/13/97 Reported: 5/28/97
Discard: 6/12/97

MW-2 (18-20') Grab Soil Sample

SUN: 2899 Holme Ave. - Philadelphia, PA

Account No: 08475
SUN: Groundwater & Enviro. Svc
410 Eagleview Blvd.
Suite 110
Exton PA 19341

P.O. 2899 HOLME AVE
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
1198	Acid Extractables SW846/8270					
1186	2-chlorophenol	N.D.	330.	ug/kg	N.D.	370.
1185	phenol	N.D.	330.	ug/kg	N.D.	370.
3746	2-nitrophenol	N.D.	330.	ug/kg	N.D.	370.
3747	2,4-dimethylphenol	N.D.	330.	ug/kg	N.D.	370.
3748	2,4-dichlorophenol	N.D.	330.	ug/kg	N.D.	370.
1190	4-chloro-3-methylphenol	N.D.	330.	ug/kg	N.D.	370.
3749	2,4,6-trichlorophenol	N.D.	330.	ug/kg	N.D.	370.
3750	2,4-dinitrophenol	N.D.	830.	ug/kg	N.D.	930.
1192	4-nitrophenol	N.D.	830.	ug/kg	N.D.	930.
3751	4,6-dinitro-2-methylphenol	N.D.	830.	ug/kg	N.D.	930.
1194	pentachlorophenol	N.D.	830.	ug/kg	N.D.	930.
1199	Base Neutrals (SW846/8270)					
3752	N-nitrosodimethylamine	N.D.	330.	ug/kg	N.D.	370.
3753	bis (2-chloroethyl) ether	N.D.	330.	ug/kg	N.D.	370.
3754	1,3-dichlorobenzene	N.D.	330.	ug/kg	N.D.	370.
1187	1,4-dichlorobenzene	N.D.	330.	ug/kg	N.D.	370.
3755	1,2-dichlorobenzene	N.D.	330.	ug/kg	N.D.	370.
3756	bis (2-chloroisopropyl) ether	N.D.	330.	ug/kg	N.D.	370.
3757	hexachloroethane	N.D.	330.	ug/kg	N.D.	370.
1188	N-nitrosodi-n-propylamine	N.D.	330.	ug/kg	N.D.	370.
3758	nitrobenzene	N.D.	330.	ug/kg	N.D.	370.
3759	isophorone	N.D.	330.	ug/kg	N.D.	370.
3760	bis (2-chloroethoxy) methane	N.D.	330.	ug/kg	N.D.	370.
1189	1,2,4-trichlorobenzene	N.D.	330.	ug/kg	N.D.	370.
3761	naphthalene	N.D.	330.	ug/kg	N.D.	370.
3762	hexachlorobutadiene	N.D.	330.	ug/kg	N.D.	370.
3763	hexachlorocyclopentadiene	N.D.	330.	ug/kg	N.D.	370.
3764	2-chloronaphthalene	N.D.	330.	ug/kg	N.D.	370.
3765	acenaphthylene	N.D.	330.	ug/kg	N.D.	370.
3766	dimethyl phthalate	N.D.	330.	ug/kg	N.D.	370.
3767	2,6-dinitrotoluene	N.D.	330.	ug/kg	N.D.	370.
1191	acenaphthene	N.D.	330.	ug/kg	N.D.	370.
1193	2,4-dinitrotoluene	N.D.	330.	ug/kg	N.D.	370.
3768	fluorene	N.D.	330.	ug/kg	N.D.	370.
3769	4-chlorophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	370.

1 COPY TO SUN:Groundwater & Environ Svc ATTN: Mr. Andy Markoski

Questions? Contact your Client Services Representative
Eileen Hostetler at (717) 656-2300
07:37:36 D 0001 4 119586 564815
320 0.00 00032020 ASR000

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2709536
Collected: 5/12/97 at 11:25 by BR

Submitted: 5/13/97 Reported: 5/28/97
Discard: 6/12/97

MW-2 (18-20') Grab Soil Sample

SUN: 2899 Holme Ave. - Philadelphia, PA

Account No: 08475
SUN: Groundwater & Enviro. Svc
410 Eagleview Blvd.
Suite 110
Exton PA 19341

P.O. 2899 HOLME AVE
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	AS RECEIVED UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
3770	diethyl phthalate	N.D.	330.	ug/kg	N.D.	370.
3771	1,2-diphenylhydrazine	N.D.	330.	ug/kg	N.D.	370.
3772	N-nitrosodiphenylamine	N.D.	330.	ug/kg	N.D.	370.
3773	4-bromophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	370.
3774	hexachlorobenzene	N.D.	330.	ug/kg	N.D.	370.
3775	phenanthrene	N.D.	330.	ug/kg	N.D.	370.

Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.

CAT NO.	Base Neutral cont SW846/8270					
3776	anthracene	N.D.	330.	ug/kg	N.D.	370.
3777	di-n-butyl phthalate	< 330.	330.	ug/kg	< 370.	370.
3778	fluoranthene	N.D.	330.	ug/kg	N.D.	370.
1195	pyrene	N.D.	330.	ug/kg	N.D.	370.
3779	benzidine	N.D.	3,300.	ug/kg	N.D.	3,700.
3780	butyl benzyl phthalate	N.D.	330.	ug/kg	N.D.	370.
3781	benzo (a) anthracene	N.D.	330.	ug/kg	N.D.	370.
3782	chrysene	N.D.	330.	ug/kg	N.D.	370.
3783	3,3'-dichlorobenzidine	N.D.	670.	ug/kg	N.D.	750.
3784	bis (2-ethylhexyl) phthalate	N.D.	330.	ug/kg	N.D.	370.
3785	di-n-octyl phthalate	N.D.	330.	ug/kg	N.D.	370.
3786	benzo (b) fluoranthene	N.D.	330.	ug/kg	N.D.	370.
3787	benzo (k) fluoranthene	N.D.	330.	ug/kg	N.D.	370.
3788	benzo (a) pyrene	N.D.	330.	ug/kg	N.D.	370.
3789	indeno (1,2,3-cd) pyrene	N.D.	330.	ug/kg	N.D.	370.
3790	dibenz (a,h) anthracene	N.D.	330.	ug/kg	N.D.	370.
3791	benzo (ghi) perylene	N.D.	330.	ug/kg	N.D.	370.

Di-n-butylphthalate was detected in the method blank at a concentration of 100. ug/kg. The blank value was not subtracted from the analytical result.

0111	Moisture	10.8	0.50	% by wt.

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

Questions? Contact your Client Services Representative
Eileen Hostetler at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Manager, Volatiles

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2709536
Collected: 5/12/97 at 11:25 by BR

Submitted: 5/13/97 Reported: 5/28/97
Discard: 6/12/97

MW-2 (18-20') Grab Soil Sample

SUN: 2899 Holme Ave. - Philadelphia, PA

Account No: 08475
SUN: Groundwater & Enviro. Svc
410 Eagleview Blvd.
Suite 110
Exton PA 19341

P.O. 2899 HOLME AVE
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
2464	Methyl tertiary butyl ether	140.	20.	ug/kg	160.	20.
6175	BTEX Scan (Total Xylenes) Soil					
2603	Benzene	< 5.	5.	ug/kg	< 6.	6.
2604	Toluene	< 5.	5.	ug/kg	< 6.	6.
2606	Ethylbenzene	< 5.	5.	ug/kg	< 6.	6.
5327	Total Xylenes	< 15.	15.	ug/kg	< 17.	17.

LABORATORY CHRONICLE

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	05/19/97 1600	Christine L. Bump
1198	Acid Extractables SW846/8270	SW-846 8270B	1	05/21/97 0224	Deb Gifford
1199	Base Neutrals (SW846/8270)	SW-846 8270B	1	05/21/97 0224	Deb Gifford
1200	Base Neutral cont SW846/8270	SW-846 8270B	1	05/21/97 0224	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	05/16/97 1842	Neelay B. Mehta
2464	Methyl tertiary butyl ether	SW-846 8020A, mod.	1	05/15/97 0746	Stephanie A. Selis
6175	BTEX Scan (Total Xylenes) Soil	SW-846 8020A, mod.	1	05/15/97 0746	Stephanie A. Selis

Questions? Contact your Client Services Representative
Eileen Hostetler at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Manager, Volatiles

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2709537
Collected: 5/12/97 at 13:45 by BR

Submitted: 5/13/97 Reported: 5/28/97
Discard: 6/12/97

MW-3 (28-30') Grab Soil Sample

SUN: 2899 Holme Ave. - Philadelphia, PA

Account No: 08475
SUN: Groundwater & Enviro. Svc
410 Eagleview Blvd.
Suite 110
Exton PA 19341

P.O. 2899 HOLME AVE
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	AS RECEIVED UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
1198	Acid Extractables SW846/8270					
1186	2-chlorophenol	N.D.	330.	ug/kg	N.D.	370.
1185	phenol	N.D.	330.	ug/kg	N.D.	370.
3746	2-nitrophenol	N.D.	330.	ug/kg	N.D.	370.
3747	2,4-dimethylphenol	N.D.	330.	ug/kg	N.D.	370.
3748	2,4-dichlorophenol	N.D.	330.	ug/kg	N.D.	370.
1190	4-chloro-3-methylphenol	N.D.	330.	ug/kg	N.D.	370.
3749	2,4,6-trichlorophenol	N.D.	330.	ug/kg	N.D.	370.
3750	2,4-dinitrophenol	N.D.	830.	ug/kg	N.D.	930.
1192	4-nitrophenol	N.D.	830.	ug/kg	N.D.	930.
3751	4,6-dinitro-2-methylphenol	N.D.	830.	ug/kg	N.D.	930.
1194	pentachlorophenol	N.D.	830.	ug/kg	N.D.	930.
1199	Base Neutrals (SW846/8270)					
3752	N-nitrosodimethylamine	N.D.	330.	ug/kg	N.D.	370.
3753	bis (2-chloroethyl) ether	N.D.	330.	ug/kg	N.D.	370.
3754	1,3-dichlorobenzene	N.D.	330.	ug/kg	N.D.	370.
1187	1,4-dichlorobenzene	N.D.	330.	ug/kg	N.D.	370.
3755	1,2-dichlorobenzene	N.D.	330.	ug/kg	N.D.	370.
3756	bis (2-chloroisopropyl) ether	N.D.	330.	ug/kg	N.D.	370.
3757	hexachloroethane	N.D.	330.	ug/kg	N.D.	370.
1188	N-nitrosodi-n-propylamine	N.D.	330.	ug/kg	N.D.	370.
3758	nitrobenzene	N.D.	330.	ug/kg	N.D.	370.
3759	isophorone	N.D.	330.	ug/kg	N.D.	370.
3760	bis (2-chloroethoxy) methane	N.D.	330.	ug/kg	N.D.	370.
1189	1,2,4-trichlorobenzene	N.D.	330.	ug/kg	N.D.	370.
3761	naphthalene	N.D.	330.	ug/kg	N.D.	370.
3762	hexachlorobutadiene	N.D.	330.	ug/kg	N.D.	370.
3763	hexachlorocyclopentadiene	N.D.	330.	ug/kg	N.D.	370.
3764	2-chloronaphthalene	N.D.	330.	ug/kg	N.D.	370.
3765	acenaphthylene	N.D.	330.	ug/kg	N.D.	370.
3766	dimethyl phthalate	N.D.	330.	ug/kg	N.D.	370.
3767	2,6-dinitrotoluene	N.D.	330.	ug/kg	N.D.	370.
1191	acenaphthene	N.D.	330.	ug/kg	N.D.	370.
1193	2,4-dinitrotoluene	N.D.	330.	ug/kg	N.D.	370.
3768	fluorene	N.D.	330.	ug/kg	N.D.	370.
3769	4-chlorophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	370.

1 COPY TO SUN:Groundwater & Environ Svc ATTN: Mr. Andy Markoski

Questions? Contact your Client Services Representative
Eileen Hostetler at (717) 656-2300
07:38:38 D 0001 4 119586 564815
320 0.00 00032020 ASR000

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2709537
Collected: 5/12/97 at 13:45 by BR

Submitted: 5/13/97 Reported: 5/28/97
Discard: 6/12/97

MW-3 (28-30') Grab Soil Sample

SUN: 2899 Holme Ave. - Philadelphia, PA

Account No: 08475
SUN: Groundwater & Enviro. Svc
410 Eagleview Blvd.
Suite 110
Exton PA 19341

P.O. 2899 HOLME AVE
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
3770	diethyl phthalate	N.D.	330.	ug/kg	N.D.	370.
3771	1,2-diphenylhydrazine	N.D.	330.	ug/kg	N.D.	370.
3772	N-nitrosodiphenylamine	N.D.	330.	ug/kg	N.D.	370.
3773	4-bromophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	370.
3774	hexachlorobenzene	N.D.	330.	ug/kg	N.D.	370.
3775	phenanthrene	N.D.	330.	ug/kg	N.D.	370.

Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.
N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.

1200 Base Neutral cont SW846/8270

3776	anthracene	N.D.	330.	ug/kg	N.D.	370.
3777	di-n-butyl phthalate	< 330.	330.	ug/kg	< 370.	370.
3778	fluoranthene	N.D.	330.	ug/kg	N.D.	370.
1195	pyrene	N.D.	330.	ug/kg	N.D.	370.
3779	benzidine	N.D.	3,300.	ug/kg	N.D.	3,700.
3780	butyl benzyl phthalate	N.D.	330.	ug/kg	N.D.	370.
3781	benzo (a) anthracene	N.D.	330.	ug/kg	N.D.	370.
3782	chrysene	N.D.	330.	ug/kg	N.D.	370.
3783	3,3'-dichlorobenzidine	N.D.	670.	ug/kg	N.D.	740.
3784	bis (2-ethylhexyl) phthalate	N.D.	330.	ug/kg	N.D.	370.
3785	di-n-octyl phthalate	N.D.	330.	ug/kg	N.D.	370.
3786	benzo (b) fluoranthene	N.D.	330.	ug/kg	N.D.	370.
3787	benzo (k) fluoranthene	N.D.	330.	ug/kg	N.D.	370.
3788	benzo (a) pyrene	N.D.	330.	ug/kg	N.D.	370.
3789	indeno (1,2,3-cd) pyrene	N.D.	330.	ug/kg	N.D.	370.
3790	dibenz (a,h) anthracene	N.D.	330.	ug/kg	N.D.	370.
3791	benzo (ghi) perylene	N.D.	330.	ug/kg	N.D.	370.

di-n-butylphthalate was detected in the method blank at a concentration of 100. ug/kg. The blank value was not subtracted from the analytical result.

0111	Moisture	10.3	0.50	% by wt.

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

Questions? Contact your Client Services Representative
Eileen Hostetler at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Manager, Volatiles

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2709537
Collected: 5/12/97 at 13:45 by BR

Submitted: 5/13/97 Reported: 5/28/97
Discard: 6/12/97

MW-3 (28-30') Grab Soil Sample

SUN: 2899 Holme Ave. - Philadelphia, PA

Account No: 08475
SUN: Groundwater & Enviro. Svc
410 Eagleview Blvd.
Suite 110
Exton PA 19341

P.O. 2899 HOLME AVE
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
2464	Methyl tertiary butyl ether	N.D.	20.	ug/kg	N.D.	20.
6175	BTEX Scan (Total Xylenes) Soil					
2603	Benzene	N.D.	5.	ug/kg	N.D.	6.
2604	Toluene	< 5.	5.	ug/kg	< 6.	6.
2606	Ethylbenzene	N.D.	5.	ug/kg	N.D.	6.
5327	Total Xylenes	N.D.	15.	ug/kg	N.D.	17.

LABORATORY CHRONICLE

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	05/19/97 1600	Christine L. Bump
1198	Acid Extractables SW846/8270	SW-846 8270B	1	05/21/97 0318	Deb Gifford
1199	Base Neutrals (SW846/8270)	SW-846 8270B	1	05/21/97 0318	Deb Gifford
1200	Base Neutral cont SW846/8270	SW-846 8270B	1	05/21/97 0318	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	05/16/97 1842	Neelay B. Mehta
2464	Methyl tertiary butyl ether	SW-846 8020A, mod.	1	05/15/97 1044	Matthew E. Barton
6175	BTEX Scan (Total Xylenes) Soil	SW-846 8020A, mod.	1	05/15/97 1044	Matthew E. Barton

Questions? Contact your Client Services Representative
Eileen Hostetler at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Manager, Volatiles

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax. 717-656-2681

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2709538
Collected: 5/12/97 at 15:50 by BR

Submitted: 5/13/97 Reported: 5/28/97
Discard: 6/12/97

MW-4 (28-30') Grab Soil Sample

SUN: 2899 Holme Ave. - Philadelphia, PA

Account No: 08475
SUN: Groundwater & Enviro. Svc
410 Eagleview Blvd.
Suite 110
Exton PA 19341

P.O. 2899 HOLME AVE
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
1198	Acid Extractables SW846/8270					
1186	2-chlorophenol	N.D.	330.	ug/kg	N.D.	360.
1185	phenol	N.D.	330.	ug/kg	N.D.	360.
3746	2-nitrophenol	N.D.	330.	ug/kg	N.D.	360.
3747	2,4-dimethylphenol	N.D.	330.	ug/kg	N.D.	360.
3748	2,4-dichlorophenol	N.D.	330.	ug/kg	N.D.	360.
1190	4-chloro-3-methylphenol	N.D.	330.	ug/kg	N.D.	360.
3749	2,4,6-trichlorophenol	N.D.	330.	ug/kg	N.D.	360.
3750	2,4-dinitrophenol	N.D.	830.	ug/kg	N.D.	910.
1192	4-nitrophenol	N.D.	830.	ug/kg	N.D.	910.
3751	4,6-dinitro-2-methylphenol	N.D.	830.	ug/kg	N.D.	910.
1194	pentachlorophenol	N.D.	830.	ug/kg	N.D.	910.
1199	Base Neutrals (SW846/8270)					
3752	N-nitrosodimethylamine	N.D.	330.	ug/kg	N.D.	360.
3753	bis (2-chloroethyl) ether	N.D.	330.	ug/kg	N.D.	360.
3754	1,3-dichlorobenzene	N.D.	330.	ug/kg	N.D.	360.
1187	1,4-dichlorobenzene	N.D.	330.	ug/kg	N.D.	360.
3755	1,2-dichlorobenzene	N.D.	330.	ug/kg	N.D.	360.
3756	bis (2-chloroisopropyl) ether	N.D.	330.	ug/kg	N.D.	360.
3757	hexachloroethane	N.D.	330.	ug/kg	N.D.	360.
1188	N-nitrosodi-n-propylamine	N.D.	330.	ug/kg	N.D.	360.
3758	nitrobenzene	N.D.	330.	ug/kg	N.D.	360.
3759	isophorone	N.D.	330.	ug/kg	N.D.	360.
3760	bis (2-chloroethoxy) methane	N.D.	330.	ug/kg	N.D.	360.
1189	1,2,4-trichlorobenzene	N.D.	330.	ug/kg	N.D.	360.
3761	naphthalene	N.D.	330.	ug/kg	N.D.	360.
3762	hexachlorobutadiene	N.D.	330.	ug/kg	N.D.	360.
3763	hexachlorocyclopentadiene	N.D.	330.	ug/kg	N.D.	360.
3764	2-chloronaphthalene	N.D.	330.	ug/kg	N.D.	360.
3765	acenaphthylene	N.D.	330.	ug/kg	N.D.	360.
3766	dimethyl phthalate	N.D.	330.	ug/kg	N.D.	360.
3767	2,6-dinitrotoluene	N.D.	330.	ug/kg	N.D.	360.
1191	acenaphthene	N.D.	330.	ug/kg	N.D.	360.
1193	2,4-dinitrotoluene	N.D.	330.	ug/kg	N.D.	360.
3768	fluorene	N.D.	330.	ug/kg	N.D.	360.
3769	4-chlorophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	360.

1 COPY TO SUN:Groundwater & Environ Svc ATTN: Mr. Andy Markoski

Questions? Contact your Client Services Representative
Eileen Hostetler at (717) 656-2300
07:39:52 D 0001 4 119586 564815
320 0.00 00032020 ASR000

Respectfully Submitted
Christine M. Ratcliff, B.S.
Senior Chemist, GC/MS

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Analysis Report

Lancaster Laboratories
A division of Thermo Analytical Inc.

P.O. 2899 HOLME AVE
Rel.

LI Sample No. SW 2709538
llected: 5/12/97 at 15:50 by BR

ubmitted: 5/13/97 Reported: 5/28/97
iscard: 6/12/97

Account No: 08475
SUN: Groundwater & Enviro. Svc
410 Eagleview Blvd.
Suite 110
Exton PA 19341

MW-4 (28-30') Grab Soil Sample

SUN: 2899 Holme Ave. - Philadelphia, PA

AT O.	ANALYSIS NAME	AS RECEIVED RESULTS	LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	LIMIT OF QUANTITATION
770	diethyl phthalate	N.D.	330.	ug/kg	N.D.	360.
771	1,2-diphenylhydrazine	N.D.	330.	ug/kg	N.D.	360.
772	N-nitrosodiphenylamine	N.D.	330.	ug/kg	N.D.	360.
773	4-bromophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	360.
774	hexachlorobenzene	N.D.	330.	ug/kg	N.D.	360.
775	phenanthrene	N.D.	330.	ug/kg	N.D.	360.

Azobenzene cannot be distinguished from 1,2-diphenylhydrazine. The results reported for 1,2-diphenylhydrazine represent the combined total of both compounds.

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.

1200 Base Neutral cont SW846/8270

3776	anthracene	N.D.	330.	ug/kg	N.D.	360.
3777	di-n-butyl phthalate	< 330.	330.	ug/kg	< 360.	360.
3778	fluoranthene	N.D.	330.	ug/kg	N.D.	360.
1195	pyrene	N.D.	330.	ug/kg	N.D.	360.
3779	benzidine	N.D.	3,300.	ug/kg	N.D.	3,600.
3780	butyl benzyl phthalate	N.D.	330.	ug/kg	N.D.	360.
3781	benzo (a) anthracene	N.D.	330.	ug/kg	N.D.	360.
3782	chrysene	N.D.	330.	ug/kg	N.D.	360.
3783	3,3'-dichlorobenzidine	N.D.	670.	ug/kg	N.D.	730.
3784	bis (2-ethylhexyl) phthalate	N.D.	330.	ug/kg	N.D.	360.
3785	di-n-octyl phthalate	N.D.	330.	ug/kg	N.D.	360.
3786	benzo (b) fluoranthene	N.D.	330.	ug/kg	N.D.	360.
3787	benzo (k) fluoranthene	N.D.	330.	ug/kg	N.D.	360.
3788	benzo (a) pyrene	N.D.	330.	ug/kg	N.D.	360.
3789	indeno (1,2,3-cd) pyrene	N.D.	330.	ug/kg	N.D.	360.
3790	dibenz (a,h) anthracene	N.D.	330.	ug/kg	N.D.	360.
3791	benzo (ghi) perylene	N.D.	330.	ug/kg	N.D.	360.

Di-n-butylphthalate was detected in the method blank at a concentration of 100. ug/kg. The blank value was not subtracted from the analytical result.

0111	Moisture	8.23	0.50	% by wt.	

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.

Questions? Contact your Client Services Representative
Eileen Hostetler at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Manager, Volatiles

Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2709538
Collected: 5/12/97 at 15:50 by BR

Submitted: 5/13/97 Reported: 5/28/97
Discard: 6/12/97

MW-4 (28-30') Grab Soil Sample

SUN: 2899 Holme Ave. - Philadelphia, PA

Account No: 08475
SUN: Groundwater & Enviro. Svc
410 Eagleview Blvd.
Suite 110
Exton PA 19341

P.O. 2899 HOLME AVE
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	AS RECEIVED LIMIT OF QUANTITATION	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT LIMIT OF QUANTITATION
2464	Methyl tertiary butyl ether	N.D.	20.	ug/kg	N.D.	20.
6175	BTEX Scan (Total Xylenes) Soil					
2603	Benzene	N.D.	5.	ug/kg	N.D.	5.
2604	Toluene	< 5.	5.	ug/kg	< 5.	5.
2606	Ethylbenzene	N.D.	5.	ug/kg	N.D.	5.
5327	Total Xylenes	N.D.	15.	ug/kg	N.D.	16.

LABORATORY CHRONICLE

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550A	1	05/19/97 1600	Christine L. Bump
1198	Acid Extractables SW846/8270	SW-846 8270B	1	05/21/97 0413	Deb Gifford
1199	Base Neutrals (SW846/8270)	SW-846 8270B	1	05/21/97 0413	Deb Gifford
1200	Base Neutral cont SW846/8270	SW-846 8270B	1	05/21/97 0413	Deb Gifford
0111	Moisture	EPA 160.3 modified	1	05/16/97 1842	Neelay B. Mehta
2464	Methyl tertiary butyl ether	SW-846 8020A, mod.	1	05/15/97 1247	Matthew E. Barton
6175	BTEX Scan (Total Xylenes) Soil	SW-846 8020A, mod.	1	05/15/97 1247	Matthew E. Barton

Questions? Contact your Client Services Representative
Eileen Hostetler at (717) 656-2300

Respectfully Submitted
Michele McClarin, B.A.
Manager, Volatiles

MEMBER ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.

Lancaster Laboratories
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Analysis Report

ANALYTICAL RESULTS

Prepared for:

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

610-942-9010

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

April 06, 2009

SAMPLE GROUP

The sample group for this submittal is 1138031. Samples arrived at the laboratory on Friday, March 27, 2009. The PO# for this group is PHILADELPHIA.

Client Description	Lancaster Labs Number
SB-1 Soil	5633946
SB-2 Soil	5633947
SB-3 Soil	5633948
SB-4 Soil	5633949
SB-5 Soil	5633950
SB-6 Soil	5633951
SB-7 Soil	5633952
SB-8 Soil	5633953

ELECTRONIC COPY TO	SUN: Mulry & Cresswell Env.	Attn: Stephanie Skelonis
ELECTRONIC COPY TO	LLI	Attn: EDD Group

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Analysis Report

Questions? Contact your Client Services Representative
Lynn M Frederiksen at (717) 656-2300

Respectfully Submitted,

Robin C. Runkle
Senior Specialist

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. SW 5633946

Group No. 1138031
PA

SB-1 Soil
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 130659-2009 SB-1

Collected: 03/26/2009 09:15 by HB

Account Number: 08474

Submitted: 03/27/2009 15:15
Reported: 04/06/2009 at 10:46
Discard: 06/06/2009

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

11078

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/kg**	**ug/kg**	**ug/kg**	
02304	Benzene	71-43-2	< 220	220	22	38.11
02304	Ethylbenzene	100-41-4	< 220	220	44	38.11
02304	Isopropylbenzene	98-82-8	< 220	220	44	38.11
02304	Methyl Tertiary Butyl Ether	1634-04-4	< 220	220	22	38.11
02304	Naphthalene	91-20-3	< 220	220	44	38.11
02304	Toluene	108-88-3	< 220	220	44	38.11
02304	Xylene (Total)	1330-20-7	< 220	220	44	38.11
SM20 2540 G	**Wet Chemistry**		**%**	**%**	**%**	
00111	Moisture	n.a.	13.2	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/10
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02304	UST-Unleaded Soils by 8260B	SW-846 8260B	1	Q090901AA	03/31/2009 15:19	Kerri E Koch	38.11
00405	GC/MS - Field Preserved MeOH	SW-846 5035	1	200908917701	03/26/2009 09:15	Client Supplied	n.a.
00111	Moisture	SM20 2540 G	1	09092820002B	04/02/2009 17:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Lancaster Laboratories Sample No. SW 5633947

Group No. 1138031
PA

SB-2 Soil
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 130659-2009 SB-2

Collected: 03/26/2009 09:45 by HB

Account Number: 08474

Submitted: 03/27/2009 15:15
Reported: 04/06/2009 at 10:46
Discard: 06/06/2009

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

21078

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/kg**	**ug/kg**	**ug/kg**	
02304	Benzene	71-43-2	1,200	220	22	37.71
02304	Ethylbenzene	100-41-4	10,000	220	45	37.71
02304	Isopropylbenzene	98-82-8	1,400	220	45	37.71
02304	Methyl Tertiary Butyl Ether	1634-04-4	< 220	220	22	37.71
02304	Naphthalene	91-20-3	5,600	220	45	37.71
02304	Toluene	108-88-3	8,100	220	45	37.71
02304	Xylene (Total)	1330-20-7	74,000	2,200	450	377.07
SM20 2540 G	**Wet Chemistry**		**%**	**%**	**%**	
00111	Moisture	n.a.	15.6	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/10
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02304	UST-Unleaded Soils by 8260B	SW-846 8260B	1	Q090901AA	03/31/2009 15:41	Kerri E Koch	37.71
02304	UST-Unleaded Soils by 8260B	SW-846 8260B	1	Q090901AA	03/31/2009 16:04	Kerri E Koch	377.07
00405	GC/MS - Field Preserved MeOH	SW-846 5035	1	200908917701	03/26/2009 09:45	Client Supplied	n.a.
00111	Moisture	SM20 2540 G	1	09092820002B	04/02/2009 17:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. SW 5633948

Group No. 1138031
PA

SB-3 Soil
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 130659-2009 SB-3

Collected: 03/26/2009 09:30 by HB

Account Number: 08474

Submitted: 03/27/2009 15:15
Reported: 04/06/2009 at 10:46
Discard: 06/06/2009

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

31078

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/kg**	**ug/kg**	**ug/kg**	
02304	Benzene	71-43-2	< 240	240	24	41.36
02304	Ethylbenzene	100-41-4	< 240	240	47	41.36
02304	Isopropylbenzene	98-82-8	< 240	240	47	41.36
02304	Methyl Tertiary Butyl Ether	1634-04-4	< 240	240	24	41.36
02304	Naphthalene	91-20-3	< 240	240	47	41.36
02304	Toluene	108-88-3	< 240	240	47	41.36
02304	Xylene (Total)	1330-20-7	< 240	240	47	41.36
SM20 2540 G	**Wet Chemistry**		%	%	%	
00111	Moisture	n.a.	12.2	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/10
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02304	UST-Unleaded Soils by 8260B	SW-846 8260B	1	Q090901AA	03/31/2009 16:26	Kerri E Koch	41.36
00405	GC/MS - Field Preserved MeOH	SW-846 5035	1	200908917701	03/26/2009 09:30	Client Supplied	n.a.
00111	Moisture	SM20 2540 G	1	09092820002B	04/02/2009 17:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Lancaster Laboratories Sample No. SW 5633949

Group No. 1138031
PA

SB-4 Soil
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 130659-2009 SB-4

Collected: 03/26/2009 10:50 by HB

Account Number: 08474

Submitted: 03/27/2009 15:15
Reported: 04/06/2009 at 10:46
Discard: 06/06/2009

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

41078

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/kg**	**ug/kg**	**ug/kg**	
02304	Benzene	71-43-2	< 240	240	24	38.17
02304	Ethylbenzene	100-41-4	< 240	240	48	38.17
02304	Isopropylbenzene	98-82-8	< 240	240	48	38.17
02304	Methyl Tertiary Butyl Ether	1634-04-4	< 240	240	24	38.17
02304	Naphthalene	91-20-3	< 240	240	48	38.17
02304	Toluene	108-88-3	< 240	240	48	38.17
02304	Xylene (Total)	1330-20-7	< 240	240	48	38.17
SM20 2540 G	**Wet Chemistry**		**%**	**%**	**%**	
00111	Moisture	n.a.	20.9	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/10
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02304	UST-Unleaded Soils by 8260B	SW-846 8260B	1	Q090901AA	03/31/2009 16:49	Kerri E Koch	38.17
00405	GC/MS - Field Preserved MeOH	SW-846 5035	1	200908917701	03/26/2009 10:50	Client Supplied	n.a.
00111	Moisture	SM20 2540 G	1	09092820002B	04/02/2009 17:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Lancaster Laboratories Sample No. SW 5633950

Group No. 1138031
PA

SB-5 Soil
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 130659-2009 SB-5

Collected: 03/26/2009 10:20 by HB

Account Number: 08474

Submitted: 03/27/2009 15:15
Reported: 04/06/2009 at 10:46
Discard: 06/06/2009

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

51078

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/kg**	**ug/kg**	**ug/kg**	
02304	Benzene	71-43-2	< 220	220	22	37.57
02304	Ethylbenzene	100-41-4	< 220	220	44	37.57
02304	Isopropylbenzene	98-82-8	< 220	220	44	37.57
02304	Methyl Tertiary Butyl Ether	1634-04-4	< 220	220	22	37.57
02304	Naphthalene	91-20-3	< 220	220	44	37.57
02304	Toluene	108-88-3	< 220	220	44	37.57
02304	Xylene (Total)	1330-20-7	< 220	220	44	37.57
SM20 2540 G	**Wet Chemistry**		%	%	%	
00111	Moisture	n.a.	14.2	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/10
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02304	UST-Unleaded Soils by 8260B	SW-846 8260B	1	Q090901AA	03/31/2009 17:11	Kerri E Koch	37.57
00405	GC/MS - Field Preserved MeOH	SW-846 5035	1	200908917701	03/26/2009 10:20	Client Supplied	n.a.
00111	Moisture	SM20 2540 G	1	09092820002B	04/02/2009 17:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Lancaster Laboratories Sample No. SW 5633951 **Group No. 1138031**
PA

SB-6 Soil
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 130659-2009 SB-6

Collected: 03/26/2009 10:35 by HB

Account Number: 08474

Submitted: 03/27/2009 15:15
Reported: 04/06/2009 at 10:46
Discard: 06/06/2009

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

61078

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/kg**	**ug/kg**	**ug/kg**	
02304	Benzene	71-43-2	< 230	230	23	37.29
02304	Ethylbenzene	100-41-4	< 230	230	47	37.29
02304	Isopropylbenzene	98-82-8	< 230	230	47	37.29
02304	Methyl Tertiary Butyl Ether	1634-04-4	< 230	230	23	37.29
02304	Naphthalene	91-20-3	< 230	230	47	37.29
02304	Toluene	108-88-3	< 230	230	47	37.29
02304	Xylene (Total)	1330-20-7	< 230	230	47	37.29
SM20 2540 G	**Wet Chemistry**		**%**	**%**	**%**	
00111	Moisture	n.a.	20.4	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/10
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02304	UST-Unleaded Soils by 8260B	SW-846 8260B	1	Q090901AA	03/31/2009 17:34	Kerri E Koch	37.29
00405	GC/MS - Field Preserved MeOH	SW-846 5035	1	200908917701	03/26/2009 10:35	Client Supplied	n.a.
00111	Moisture	SM20 2540 G	1	09092820002B	04/02/2009 17:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Lancaster Laboratories Sample No. SW 5633952 **Group No. 1138031**
PA

SB-7 Soil
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 130659-2009 SB-7

Collected: 03/26/2009 10:00 by HB

Account Number: 08474

Submitted: 03/27/2009 15:15
Reported: 04/06/2009 at 10:46
Discard: 06/06/2009

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

71078

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/kg**	**ug/kg**	**ug/kg**	
02304	Benzene	71-43-2	< 220	220	22	39.43
02304	Ethylbenzene	100-41-4	< 220	220	45	39.43
02304	Isopropylbenzene	98-82-8	< 220	220	45	39.43
02304	Methyl Tertiary Butyl Ether	1634-04-4	< 220	220	22	39.43
02304	Naphthalene	91-20-3	< 220	220	45	39.43
02304	Toluene	108-88-3	< 220	220	45	39.43
02304	Xylene (Total)	1330-20-7	< 220	220	45	39.43
SM20 2540 G	**Wet Chemistry**		**%**	**%**	**%**	
00111	Moisture	n.a.	11.5	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/10
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02304	UST-Unleaded Soils by 8260B	SW-846 8260B	1	Q090901AA	03/31/2009 17:56	Kerri E Koch	39.43
00405	GC/MS - Field Preserved MeOH	SW-846 5035	1	200908917701	03/26/2009 10:00	Client Supplied	n.a.
00111	Moisture	SM20 2540 G	1	09092820002B	04/02/2009 17:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Lancaster Laboratories Sample No. SW 5633953 **Group No. 1138031**
PA

SB-8 Soil
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 130659-2009 SB-8

Collected: 03/26/2009 11:05 by HB

Account Number: 08474

Submitted: 03/27/2009 15:15
Reported: 04/06/2009 at 10:46
Discard: 06/06/2009

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

81078

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Limit of Quantitation*	Dry Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/kg**	**ug/kg**	**ug/kg**	
02304	Benzene	71-43-2	< 240	240	24	42.02
02304	Ethylbenzene	100-41-4	< 240	240	49	42.02
02304	Isopropylbenzene	98-82-8	< 240	240	49	42.02
02304	Methyl Tertiary Butyl Ether	1634-04-4	< 240	240	24	42.02
02304	Naphthalene	91-20-3	< 240	240	49	42.02
02304	Toluene	108-88-3	< 240	240	49	42.02
02304	Xylene (Total)	1330-20-7	< 240	240	49	42.02
SM20 2540 G	**Wet Chemistry**		%	%	%	
00111	Moisture	n.a.	13.4	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/10
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02304	UST-Unleaded Soils by 8260B	SW-846 8260B	1	Q090901AA	03/31/2009 18:18	Kerri E Koch	42.02
00405	GC/MS - Field Preserved MeOH	SW-846 5035	1	200908917701	03/26/2009 11:05	Client Supplied	n.a.
00111	Moisture	SM20 2540 G	1	09092820002B	04/02/2009 17:22	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: Sunoco c/o Mulry & Cresswell
Reported: 04/06/09 at 10:46 AM

Group Number: 1138031

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Q090901AA	Sample number(s): 5633946-5633953								
Benzene	< 250	250.	25	ug/kg	103	101	83-116	1	30
Ethylbenzene	< 250	250.	50	ug/kg	95	94	79-110	2	30
Isopropylbenzene	< 250	250.	50	ug/kg	95	94	74-111	2	30
Methyl Tertiary Butyl Ether	< 250	250.	25	ug/kg	104	100	79-114	3	30
Naphthalene	< 250	250.	50	ug/kg	85	85	59-123	0	30
Toluene	< 250	250.	50	ug/kg	96	94	81-112	2	30
Xylene (Total)	< 250	250.	50	ug/kg	96	94	78-108	2	30
Batch number: 09092820002B	Sample number(s): 5633946-5633953								
Moisture					100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 09092820002B	Sample number(s): 5633946-5633953					BKG: P633913			
Moisture						10.1	10.6	4	15

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: UST-Unleaded Soils by 8260B
Batch number: Q090901AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5633946	80	80	78	74
5633947	74	77	76	83
5633948	86	89	86	87
5633949	74	77	72	72
5633950	81	82	80	78
5633951	74	78	73	72
5633952	79	82	77	76
5633953	86	88	84	83
Blank	100	102	90	89
LCS	100	104	92	91

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Sunoco c/o Mulry & Cresswell Group Number: 1138031
Reported: 04/06/09 at 10:46 AM

Surrogate Quality Control

LCSD	98	101	90	90
Limits:	71-114	70-109	70-123	70-111

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

8474/1138031/5633946-54

Chain of Custody Record

On-site Time:	Temp 0.0
Off-site Time:	Temp 0.0
Sky Conditions:	
Meteorological Events:	
Wind Speed: 0.0	Direc

Sunoco DUNS #: 00051078
Region:
State or Lead Regulatory Agency:
Requested Due Date (mm/dd/yy):
COC Tracking Number: 130659-2009

Lab Name: LANCASTER LABORATORIES INC	Facility Address: 2899 HOLME AVENUE	Consultant/Contractor: MULRY & CRESSWELL ENVIRON
Address:	Facility City, State: PHILADELPHIA PA	Address: 1691 Horseshoe Pike, Manor Professional Buil
	Site Lat/Long: 40.056635 -75.029144	Glenmoore, PA, 19343
Lab PM:	Sunoco PM Contact: Martin Liebhardt	Consultant/Contractor Project No.:
Tele/Fax:	Address: 350 Eagleview Blvd,	Consultant/Contractor PM: Stephanie Skelonis
Report Type & QC Level:	Exton, PA, 19341	Tele/Fax: (610) 942-9010 610-942-9039
E-mail EDD To: SunocoENFOS@deltaenv.com	Tele/Fax: (610) 450-5345 (610) 450-5252	Invoice to:

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Liquid	Matrix: Solid	Matrix: Gas	Laboratory No.	No. of Containers	Preservative	Requested Analysis: 160.3Moist/Total%	Requested Analysis: PA8260UG	Sample Point Lat/Long and Comments: Vial #	Sample Point Lat/Long and Comments: Collection Depth
1	SB-1	0915	3/26/09		SO			2		X	X	0815596	7.2'
2	SB-2	0945			SO					X	X	08156000	6.8'
3	SB-3	0930			SO					X	X	0815594	11.7'
4	SB-4	1050			SO					X	X	08156001	5.8'
5	SB-5	1020			SO					X	X	08156053	8.9'
6	SB-6	1035			SO					X	X	08156002	4.3'
7	SB-7	1000			SO					X	X	08155995	6.6'
8	SB-8	1105			SO					X	X	08156040	10.0'
9													
10													

Sampler's Name: H.G. Bienkowski	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: MCE		3/26/09	900		3/26/09	900
Shipment Date:		3/27/09	1515			
Shipment Method:					3/27/09	1515
Shipment Tracking No:						

Special Instructions:

Custody Seals In Place Yes / No | Temp Blank Yes / No | Cooler Temperature on Receipt 2.5°C | Trip Blank Yes / No

Lancaster Laboratories
Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib >5 um/ml**	fibers greater than 5 microns in length per ml

< less than – The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike amount not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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APPENDIX B

PAGWIS Documentation

PAWellID	WellAddre	DateDrilled	TypeOfActivity	LatitudeDD	LongitudeD	Driller	OriginalOwner	WellUse	WaterUse	WellDepth	Remark
605728	HOLME CIF	12/6/2002	NEW WELL	40.05668	-75.0286	B. L. MYERS BROS OF I	Sunoco	WITHDRAWAL	DOMESTIC	50	MWs 1-10.DRILLER SHOWS WELL AT 2899 HOLME AVE WHICH IS A
605728	HOLME CIF	12/6/2002	NEW WELL	40.05668	-75.0286	B. L. MYERS BROS OF I	Sunoco	INJECTION	OTHER	50	MWs 1-10.DRILLER SHOWS WELL AT 2899 HOLME AVE WHICH IS A
605728	HOLME CIF	12/6/2002	NEW WELL	40.05668	-75.0286	B. L. MYERS BROS OF I	Sunoco	MONITORING	OTHER	50	MWs 1-10.DRILLER SHOWS WELL AT 2899 HOLME AVE WHICH IS A
523908	HOLME CIF	3/19/2009	NEW WELL	40.05668	-75.0286	B. L. MYERS BROS OF I	Sunoco STATION	MONITORING	OTHER		MWs 1-10.DRILLER SHOWS WELL AT 2899 HOLME AVE WHICH IS A
523908	HOLME CIF	3/19/2009	NEW WELL	40.05668	-75.0286	B. L. MYERS BROS OF I	Sunoco STATION	WITHDRAWAL	DOMESTIC		MWs 1-10.DRILLER SHOWS WELL AT 2899 HOLME AVE WHICH IS A
510576	2901 Holm	8/29/2013	NEW WELL	40.05673	-75.0282	TALON DRILLING CON	Ashton Road	MONITORING		50	
510575	2901 Holm	8/30/2013	NEW WELL	40.05696	-75.028	TALON DRILLING CON	Ashton Road	MONITORING		50	
510574	2901 Holm	8/29/2013	NEW WELL	40.0567	-75.028	TALON DRILLING CON	Ashton Road	MONITORING		50	
30336		1/1/1923		40.05556	-75.0294	THOMAS B HARPER	ST MARGARET IN	DESTROYED	UNUSED	27	

CONOCO GAS STATION PER AUG 2018 GOOGLE STREET IMAGERY.
CONOCO GAS STATION PER AUG 2018 GOOGLE STREET IMAGERY.
CONOCO GAS STATION PER AUG 2018 GOOGLE STREET IMAGERY.
CONOCO GAS STATION PER AUG 2018 GOOGLE STREET IMAGERY.
CONOCO GAS STATION PER AUG 2018 GOOGLE STREET IMAGERY.

APPENDIX C

Observation Well and Soil Boring Drilling Logs

Groundwater & Environmental Services, Inc.

Drilling Log

Project Sunoco Station #0005-1078 Owner Sun Company, Inc. (R&M)

Location 2899 Holme Avenue Permit No. N/A

Boring number MW-1 Total Depth 40 ft. Diameter 10 in.

Casing Elevation 99.64 ft. Water Level: Initial 38 ft. Static 33.98 ft.

Screen Dia. 4-inch Length 30 ft. Slot Size 0.020 inch

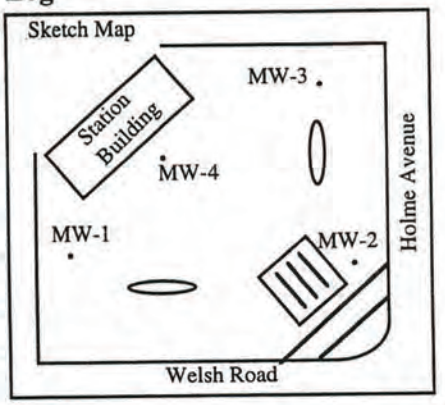
Casing Dia. 4-inch Length 10 ft. Type PVC

Drilling Method Air Rotary Sample Method Split-Spoon/Grab Cuttings

Completion Details Flush mount manhole with locking cap

Driller B.L. Myers Bros. Log By B. Ricker Date 12 May 1997

Sketch Map



Depth (feet)	Blow Count	Well Const.	OVM (ppm)	Recovery (in.)	Lithology
					ASPHALT/ CRUSHED STONE
			0		CLAY - Orange-brown clay, damp
5	push		0	0	
	push		0	24	
10					-River gravels (1/4" - 1/2" dia.) at 11 to 13 feet
	push		0	24	-Beginning saprolite, brown at 14 feet
15					
	push		0	24	-Saprolite, dry to damp
20					
	push		0	12	-Spoon refusal at 24 feet
25					
30					

Groundwater & Environmental Services, Inc.

Drilling Log

Project Sunoco Station #0005-1078 Owner Sun Company, Inc. (R&M)

Location 2899 Holme Avenue Permit No. N/A

Boring number MW-1 Total Depth 40 ft. Diameter 10 in.

Casing Elevation 99.64 ft. Water Level: Initial 38 ft. Static 33.98 ft.

Screen Dia. 4-inch Length 30 ft. Slot Size 0.020 inch

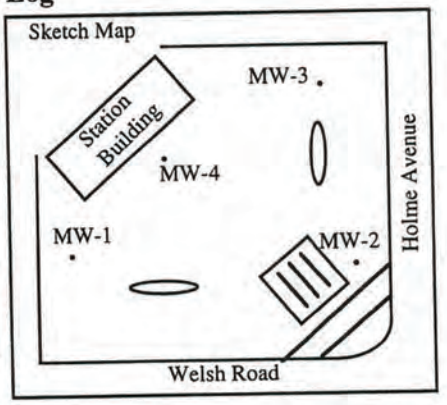
Casing Dia. 4-inch Length 10 ft. Type PVC

Drilling Method Air Rotary Sample Method Split-Spoon/Grab Cuttings

Completion Details Flush mount manhole with locking cap

Driller B.L. Myers Bros. Log By B. Ricker Date 12 May 1997

Sketch Map



Depth (feet)	Blow Count	Well Const.	OVM (ppm)	Recovery (in.)	Lithology
			46.3		CLAY - Brown clay, damp, saprolite
35			860		
40					BORING COMPLETED AT 40 FEET
45					
50					
55					
60					

Groundwater & Environmental Services, Inc.

Drilling Log

Project Sunoco Station #0005-1078 Owner Sun Company, Inc. (R&M)

Location 2899 Holme Avenue Permit No. N/A

Boring number MW-2 Total Depth 40 ft. Diameter 10 in.

Casing Elevation 99.27 ft. Water Level: Initial 38 ft. Static 33.31 ft.

Screen Dia. 4-inch Length 30 ft. Slot Size 0.020 inch

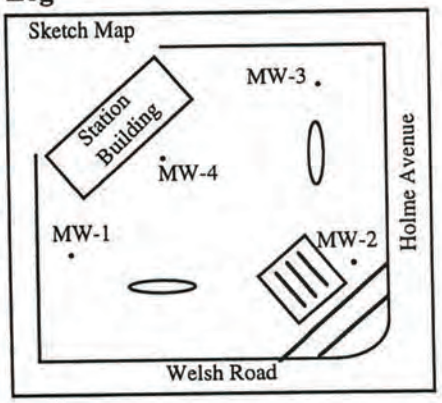
Casing Dia. 4-inch Length 10 ft. Type PVC

Drilling Method Air Rotary Sample Method Split-Spoon/Grab Cuttings

Completion Details Flush mount manhole with locking cap

Driller B.L. Myers Bros. Log By B. Ricker Date 12 May 1997

Sketch Map



Depth (feet)	Blow Count	Well Const.	OVM (ppm)	Recovery (in.)	Lithology
					ASPHALT/ CRUSHED STONE
			0		CLAY - Brown clay, damp
5	push		0	18	
	push		1.5	24	
10					
	push		4.0	24	-Beginning saprolite, brown at 14.5 feet
15					
	push		156	24	-Saprolite, dry to damp
20					
	push		153	24	-Spoon refusal at 25 feet
25			75		
30			0		

Groundwater & Environmental Services, Inc.

Drilling Log

Project Sunoco Station #0005-1078 Owner Sun Company, Inc. (R&M)

Location 2899 Holme Avenue Permit No. N/A

Boring number MW-2 Total Depth 40 ft. Diameter 10 in.

Casing Elevation 99.27 ft. Water Level: Initial 38 ft. Static 33.31 ft.

Screen Dia. 4-inch Length 30 ft. Slot Size 0.020 inch

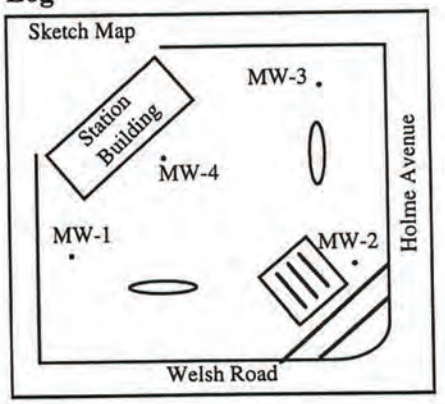
Casing Dia. 4-inch Length 10 ft. Type PVC

Drilling Method Air Rotary Sample Method Split-Spoon/Grab Cuttings

Completion Details Flush mount manhole with locking cap

Driller B.L. Myers Bros. Log By B. Ricker Date 12 May 1997

Sketch Map



Depth (feet)	Blow Count	Well Const.	OVM (ppm)	Recovery (in.)	Lithology
35			0		CLAY - Brown clay, damp, saprolite
40			0		BORING COMPLETED AT 40 FEET
45					
50					
55					
60					

Groundwater & Environmental Services, Inc.

Drilling Log

Project Sunoco Station #0005-1078 Owner Sun Company, Inc. (R&M)

Location 2899 Holme Avenue Permit No. N/A

Boring number MW-3 Total Depth 40 ft. Diameter 10 in.

Casing Elevation 98.47 ft. Water Level: Initial 39 ft. Static 32.49 ft.

Screen Dia. 4-inch Length 30 ft. Slot Size 0.020 inch

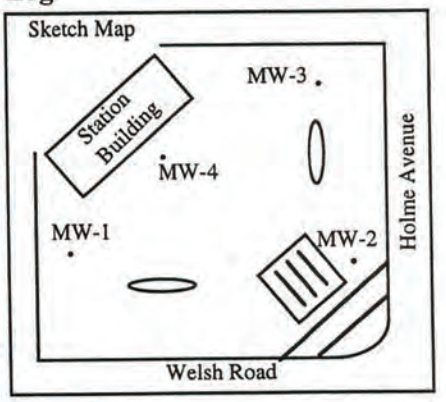
Casing Dia. 4-inch Length 10 ft. Type PVC

Drilling Method Air Rotary Sample Method Split-Spoon/Grab Cuttings

Completion Details Flush mount manhole with locking cap

Driller B.L. Myers Bros. Log By B. Ricker Date 12 May 1997

Sketch Map



Depth (feet)	Blow Count	Well Const.	OVM (ppm)	Recovery (in.)	Lithology
					ASPHALT/ CRUSHED STONE
			0		CLAY - Brown clay, damp
5	push		0	0	
	push		0	24	-Beginning saprolite, brown , dry at 14 feet
10					
	push		0	24	-Spoon refusal at 14 feet
15					
			0		
20					
			0		
25					
			0		
30					

Groundwater & Environmental Services, Inc.

Drilling Log

Project Sunoco Station #0005-1078 Owner Sun Company, Inc. (R&M)

Location 2899 Holme Avenue Permit No. N/A

Boring number MW-3 Total Depth 40 ft. Diameter 10 in.

Casing Elevation 98.47 ft. Water Level: Initial 39 ft. Static 32.49 ft.

Screen Dia. 4-inch Length 30 ft. Slot Size 0.020 inch

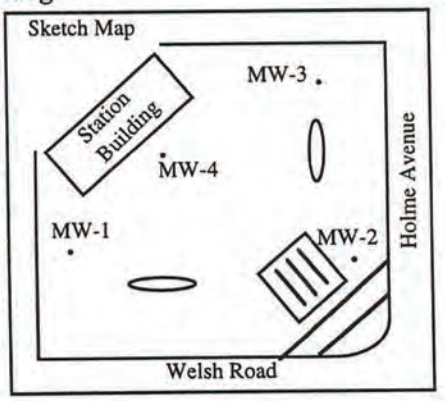
Casing Dia. 4-inch Length 10 ft. Type PVC

Drilling Method Air Rotary Sample Method Split-Spoon/Grab Cuttings

Completion Details Flush mount manhole with locking cap

Driller B.L. Myers Bros. Log By B. Ricker Date 12 May 1997

Sketch Map



Depth (feet)	Blow Count	Well Const.	OVM (ppm)	Recovery (in.)	Lithology
35			0		CLAY - Brown clay, damp, saprolite
40			0		BORING COMPLETED AT 40 FEET
45					
50					
55					
60					

Groundwater & Environmental Services, Inc.

Drilling Log

Project Sunoco Station #0005-1078 Owner Sun Company, Inc. (R&M)

Location 2899 Holme Avenue Permit No. N/A

Boring number MW-4 Total Depth 40 ft. Diameter 10 in.

Casing Elevation 100.00 ft. Water Level: Initial 38 ft. Static 34.25 ft.

Screen Dia. 4-inch Length 30 ft. Slot Size 0.020 inch

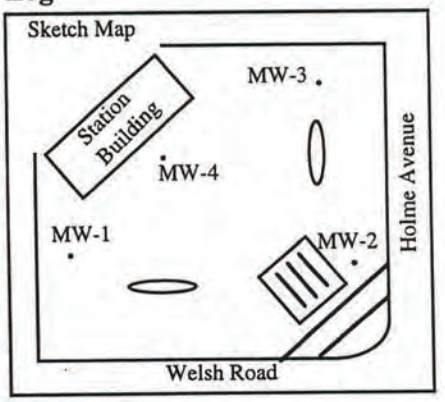
Casing Dia. 4-inch Length 10 ft. Type PVC

Drilling Method Air Rotary Sample Method Split-Spoon/Grab Cuttings

Completion Details Flush mount manhole with locking cap

Driller B.L. Myers Bros. Log By B. Ricker Date 12 May 1997

Sketch Map



Depth (feet)	Blow Count	Well Const.	OVM (ppm)	Recovery (in.)	Lithology
					ASPHALT/ CRUSHED STONE
			0		CLAY - Orange-brown clay, damp
5	push		0	24	
	push		0	0	
10					
	push		0	20	
15					-Saprolite, brown, spoon refusal at 15 feet
20			0		
25			0		
30			0		

Groundwater & Environmental Services, Inc.

Drilling Log

Project Sunoco Station #0005-1078 Owner Sun Company, Inc. (R&M)

Location 2899 Holme Avenue Permit No. N/A

Boring number MW-4 Total Depth 40 ft. Diameter 10 in.

Casing Elevation 100.00 ft. Water Level: Initial 38 ft. Static 34.25 ft.

Screen Dia. 4-inch Length 30 ft. Slot Size 0.020 inch

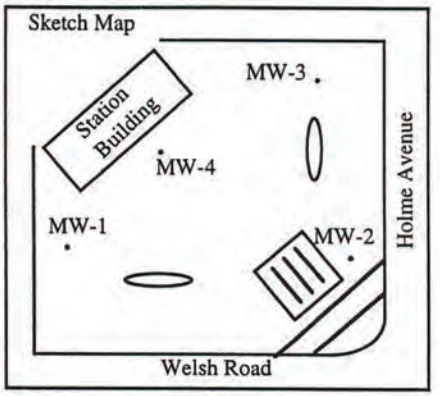
Casing Dia. 4-inch Length 10 ft. Type PVC

Drilling Method Air Rotary Sample Method Split-Spoon/Grab Cuttings

Completion Details Flush mount manhole with locking cap

Driller B.L. Myers Bros. Log By B. Ricker Date 12 May 1997

Sketch Map



Depth (feet)	Blow Count	Well Const.	OVM (ppm)	Recovery (in.)	Lithology
35			0		CLAY - Brown clay, damp, saprolite
40			0		BORING COMPLETED AT 40 FEET
45					
50					
55					
60					

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Observation Well Drilling Log

Location: Sunoco Station
2899 Holme Avenue
Philadelphia, PA

Drillers: B. L. Myers Bros., Inc.
Glenmoore, PA

Method: Hand Clearing
7" Air Rotary Hammer

Identification: OW 6
Date: 12-Oct-00
Geologist: Henry Bienkowski, P.G.

Construction
Screen: 4" diameter schedule 40 PVC
35 feet

Riser: 4" diameter schedule 40 PVC
15 feet

Total Depth: 50 feet

Depth (feet)	Lithology	Sample Depth	PID (ppm)
0 - 8"	Asphalt and Ballast		
		5'	1.1
8" - 15'	Silty clay and clayey silt and sand, coarsening with depth	10'	1.4
		15'	1.1
15' - 50'		20'	0.7
	Brown silt, moist	25'	0.5
	Red brown silt and some very fine grain sand, moist	30'	0.4
		35'	0.4
	Red brown silt, trace clay, sand, moist	40'	0.7
	Top of Bedrock at 41' Brown weathered shist, some micas and silicates	45'	1.8
		50'	0.8

0' 5' 10' 15' 20' 25' 30' 35' 40' 45' 50'

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Observation Well Drilling Log

Location: Sunoco Station
2899 Holme Avenue
Philadelphia, PA

Identification: OW 7
Date: 19-Mar-09
Geologist: Henry Bienkowski, P.G.

Drillers: B. L. Myers Bros., Inc.
Glenmoore, PA

Construction
Screen: 4" diameter schedule 40 PVC
35 feet

Method: Hand Clearing 18-Mar-09
7" Air Rotary Hammer 19-Mar-09

Riser: 4" diameter schedule 40 PVC
15 feet

Total Depth: 50 feet

Depth (feet)	Lithology	Well Const.	Sample Depth	PID (ppm)
0 - 6"	Asphalt and Ballast			
6" - 2'	Brown topsoil and clay, moist			
2' - 3'	Orange brown clay, some silt, moist			
			5'	1.1
3' - 10'	Brown silty clay, some gravel			
			10'	1.4
10' - 20'	Brown silt, trace clay		15'	1.1
			20'	0.7
20' - 25'	Brown silt, moist		25'	0.5
25' - 35'	Red brown silt and some very fine grain sand, moist		30'	0.4
			35'	0.4
35' - 41'	Red brown silt, trace clay, sand, moist		40'	0.7
41' - 50'	Top of Bedrock at 41' Brown weathered shist, some micas and silicates		45'	1.8
			50'	0.8

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Observation Well Drilling Log

Location: Sunoco Station
2899 Holme Avenue
Philadelphia, PA

Identification: OW 8
Date: 19-Mar-09
Geologist: Henry Bienkowski, P.G.

Drillers: B. L. Myers Bros., Inc.
Glenmoore, PA

Construction
Screen: 4" diameter schedule 40 PVC
35 feet

Method: Hand Clearing 18-Mar-09
7" Air Rotary Hammer 19-Mar-09

Riser: 4" diameter schedule 40 PVC
15 feet

Total Depth: 50 feet

	Depth (feet)	Lithology	Well Const.	Sample Depth	PID (ppm)
0'	0 - 6"	Asphalt and Ballast			
				5'	0.8
5'	6" - 10'	Brown Clay; moist			
				10'	0.2
10'	10' - 15'	Brown Clay, silty; moist			
				15'	2.8
15'	15' - 25'	Brown silt			
				20'	1.5
20'					
				25'	1.7
25'	25' - 40'	Brown Schist, weathered. Top of bedrock at 30'			
				30'	1.5
30'					
				35'	6.2
35'					
				40'	32.1
40'	40' - 50'	Gray brown Schist, weathered			
				45'	8.4
45'					
				50'	2.9
50'					

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Soil Gas Sampling Point Drilling Log

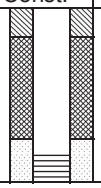
Location: Sunoco Station (DUNS No.: 0005-1078)
2899 Holme Avenue
Philadelphia, PA

Identification: VP 1
Date: 26-Mar-09
Geologist: Hank Bienkowski, P.G.

Driller: B. L. Myers Bros., Inc.
Glenmoore, PA

Method: Direct push core, 0'- 6'

Construction
Screen: 1" diameter schedule 40 PVC, 1 foot
Riser: 1" diameter schedule 40 PVC, 5 feet
Total Depth: 6 feet

	Depth (feet)	Lithology	Well Const.	Sample Depth	OVM (ppm)
0	0' - 1'	Macadum - (0' - 0.25'); brown clay (0.25' - 1')			
	1' - 6'	Brown clay			
5'					
6'					

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Soil Gas Sampling Point Drilling Log

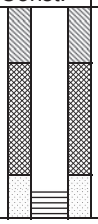
Location: Sunoco Station (DUNS No.: 0005-1078)
2899 Holme Avenue
Philadelphia, PA

Identification: VP 2
Date: 26-Mar-09
Geologist: Hank Bienkowski, P.G.

Driller: B. L. Myers Bros., Inc.
Glenmoore, PA

Method: Direct push core, 0'- 6'

Construction
Screen: 1" diameter schedule 40 PVC, 1 foot
Riser: 1" diameter schedule 40 PVC, 5 feet
Total Depth: 6 feet

	Depth (feet)	Lithology	Well Const.	Sample Depth	OVM (ppm)
0'	0' - 15"	Macadum - (0' - 0.5'); brown silty clay and coblesized rock fragments (0.5' - 15")			
	15" - 6'	Brown silty clay			
5'					
6'					

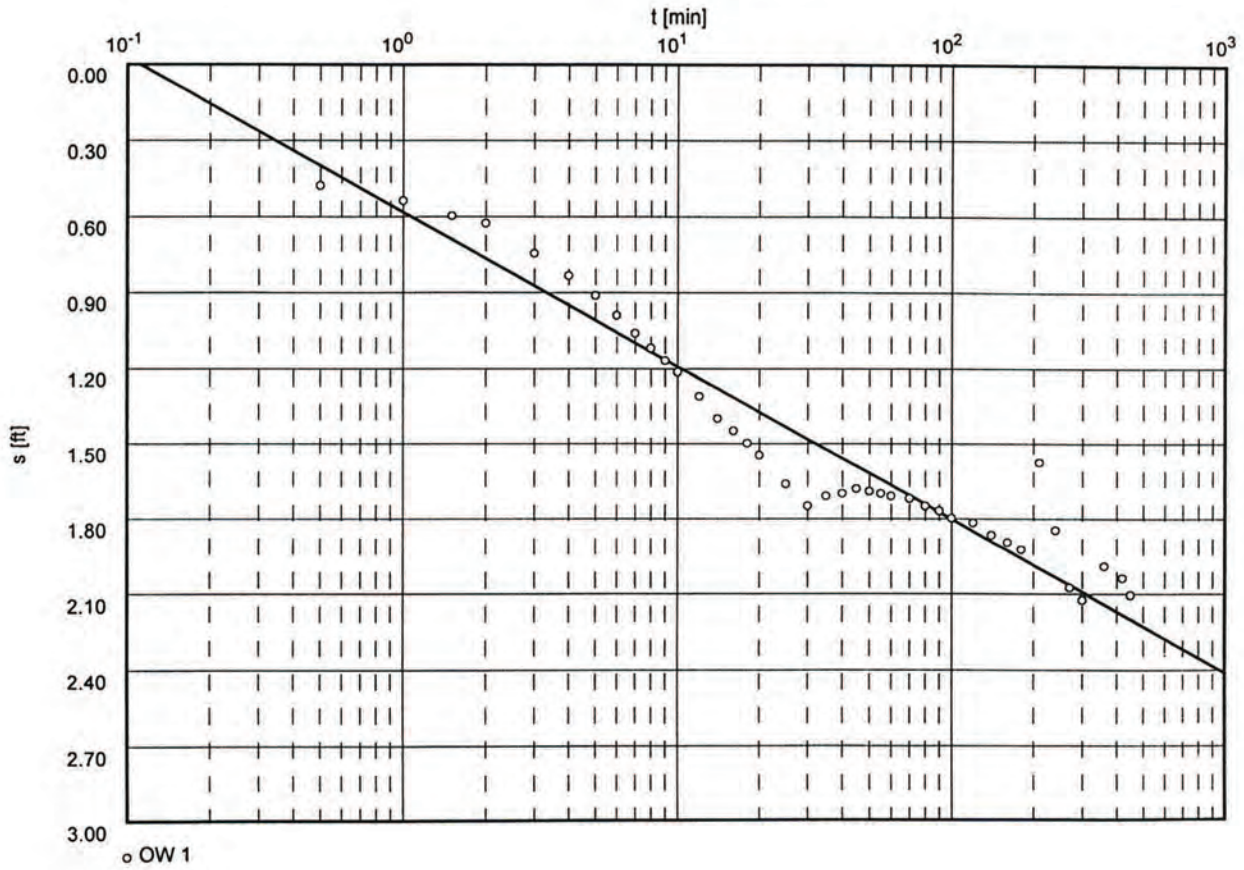
= concrete
= bentonite
= well sand

APPENDIX D

Slug Testing Analyses

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

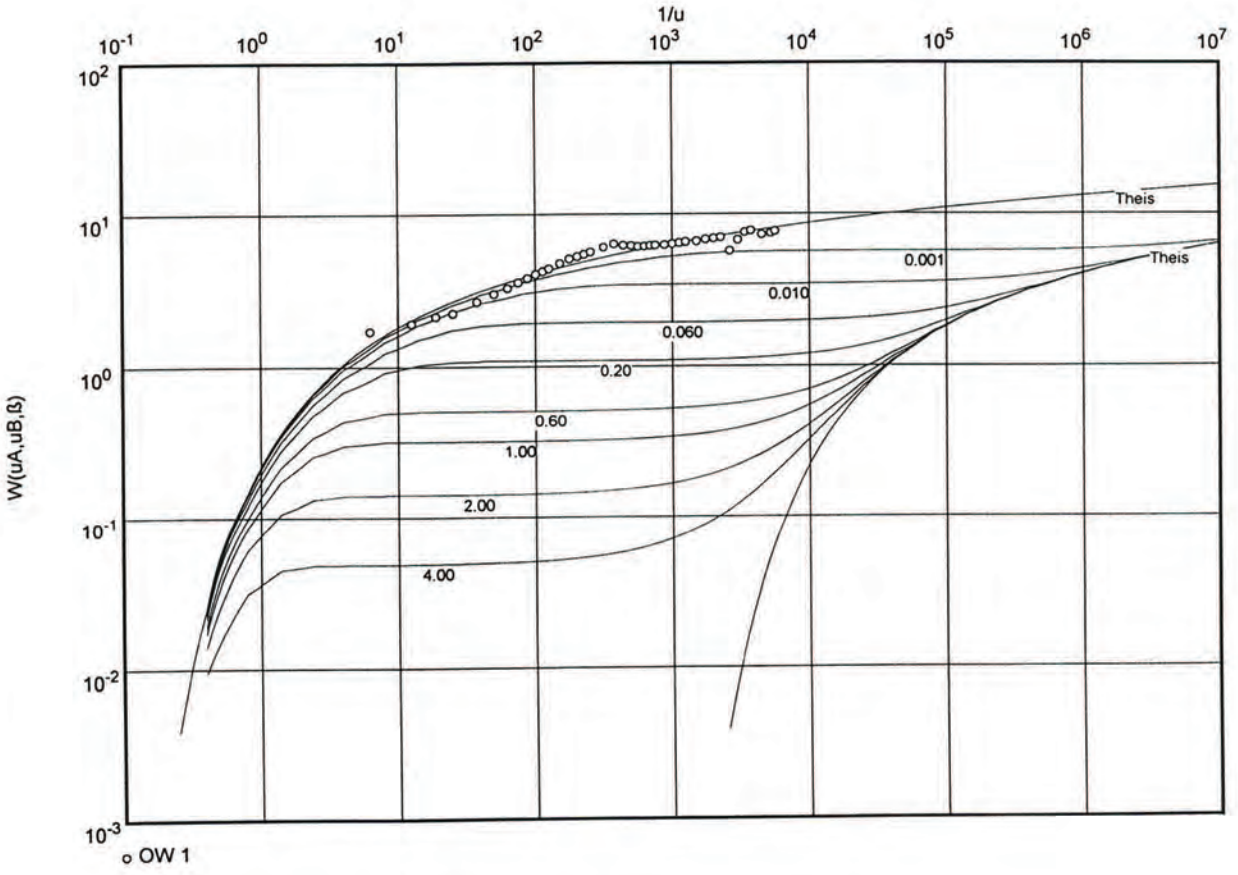
Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Time-Drawdown-method after COOPER & JACOB Unconfined aquifer	Date: 07.06.2000	Page 3
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

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	0.36		
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

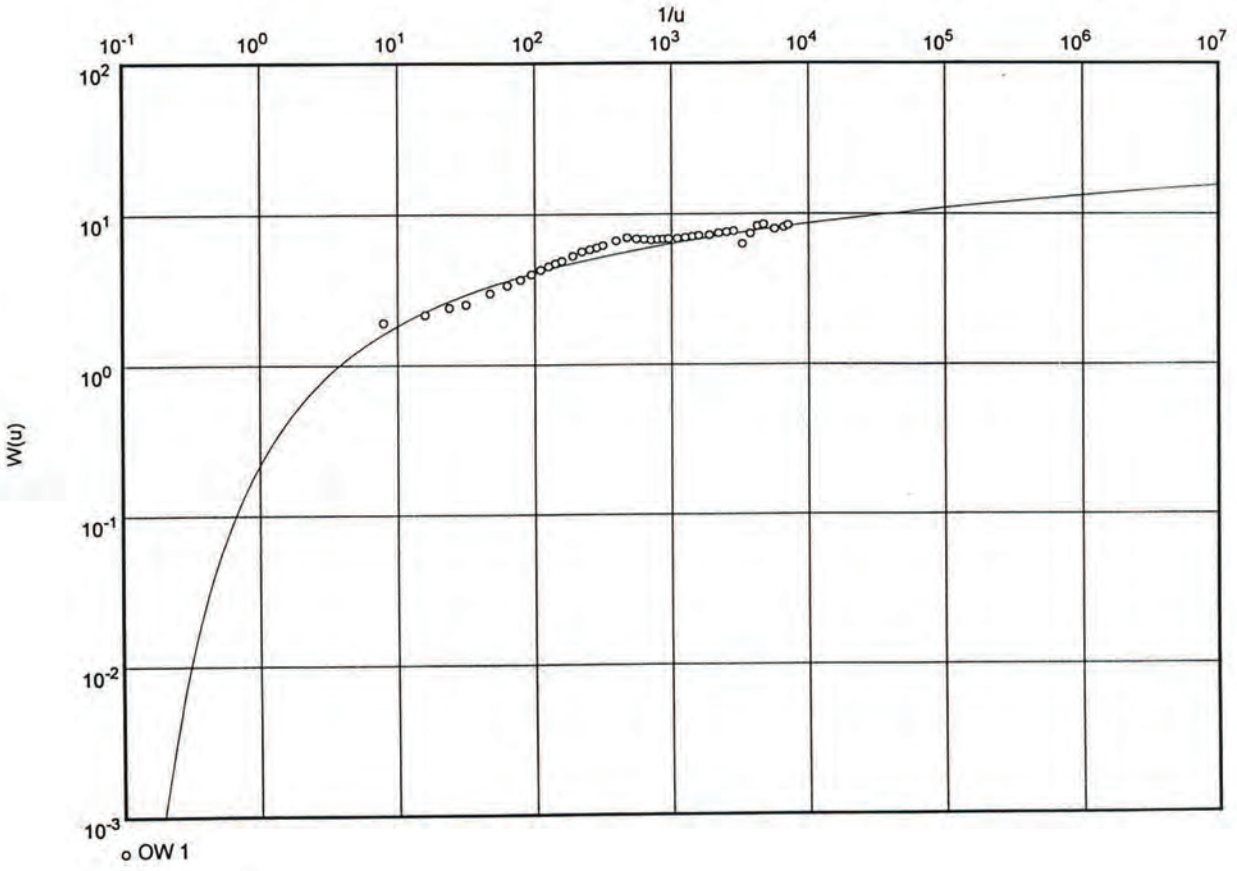
Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis NEUMAN's method Unconfined aquifer with delayed watertable response	Date: 07.06.2000	Page 3
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

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

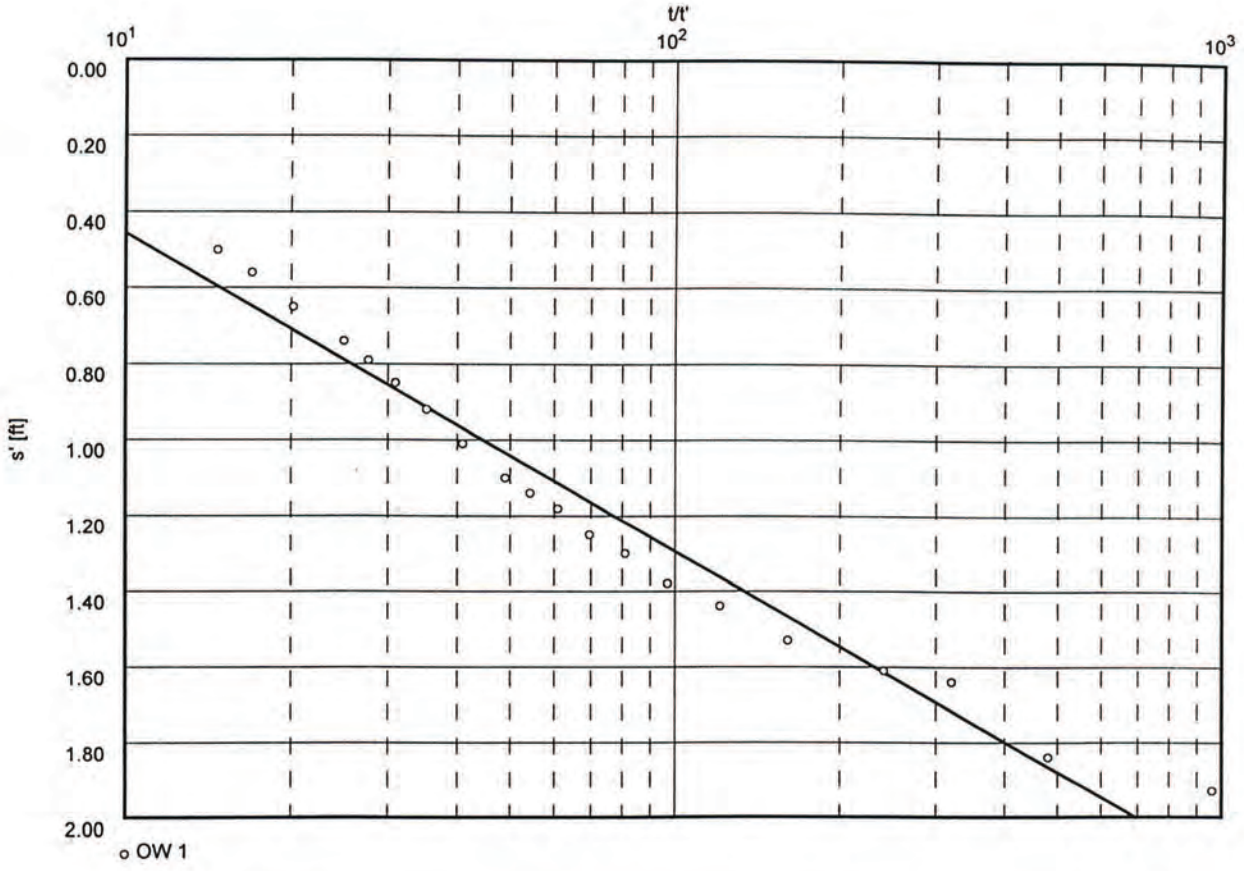
Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Theis analysis method Unconfined aquifer	Date: 07.06.2000	Page 3
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

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}

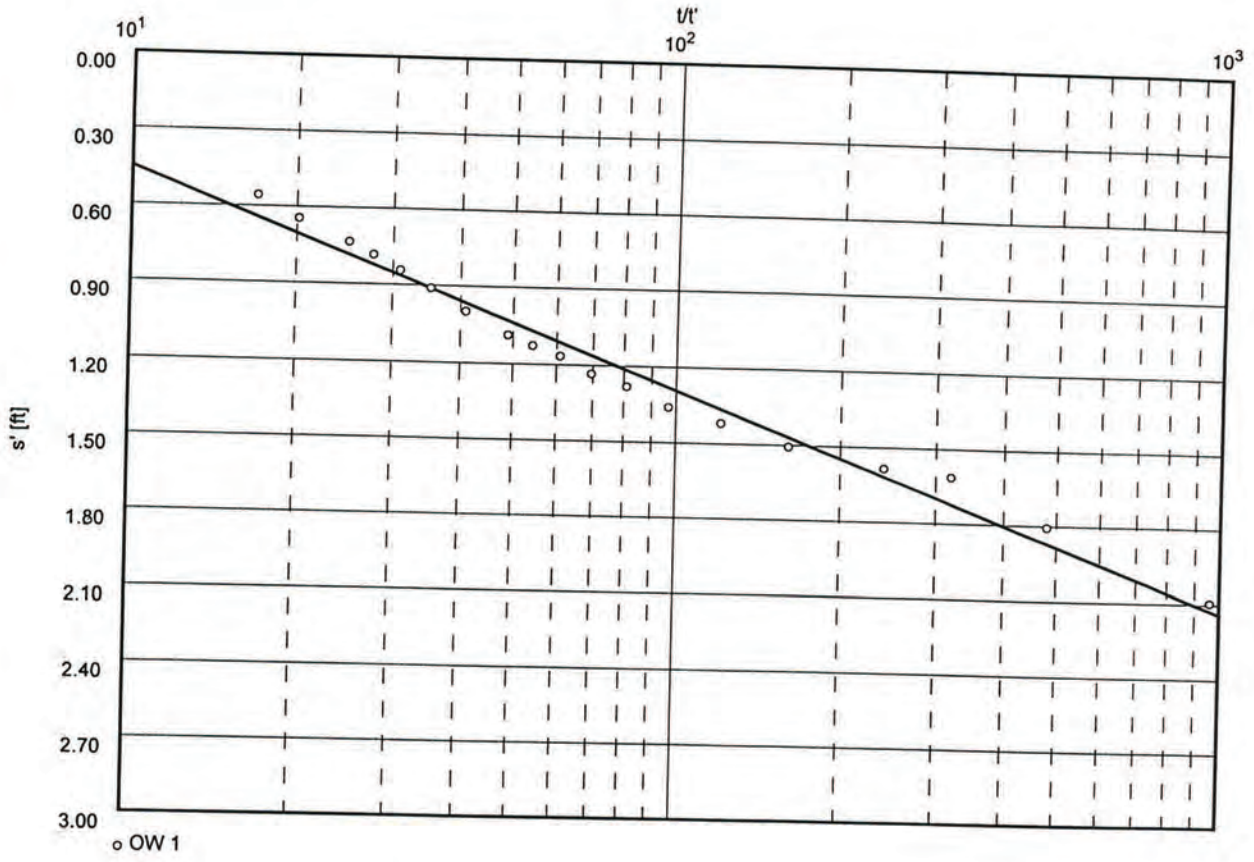
Mulry & Cresswell Environmental, Inc. 1691 Horseshoe Pike, Manor Prof. Bldg., Suite 1 Glenmoore, PA 19343	Pumping test analysis Recovery method after THEIS & JACOB Confined aquifer	Date: 08.06.2000	Page 2
		Project: 2899 Holme Avenue	
		Evaluated by: JMZ	

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	

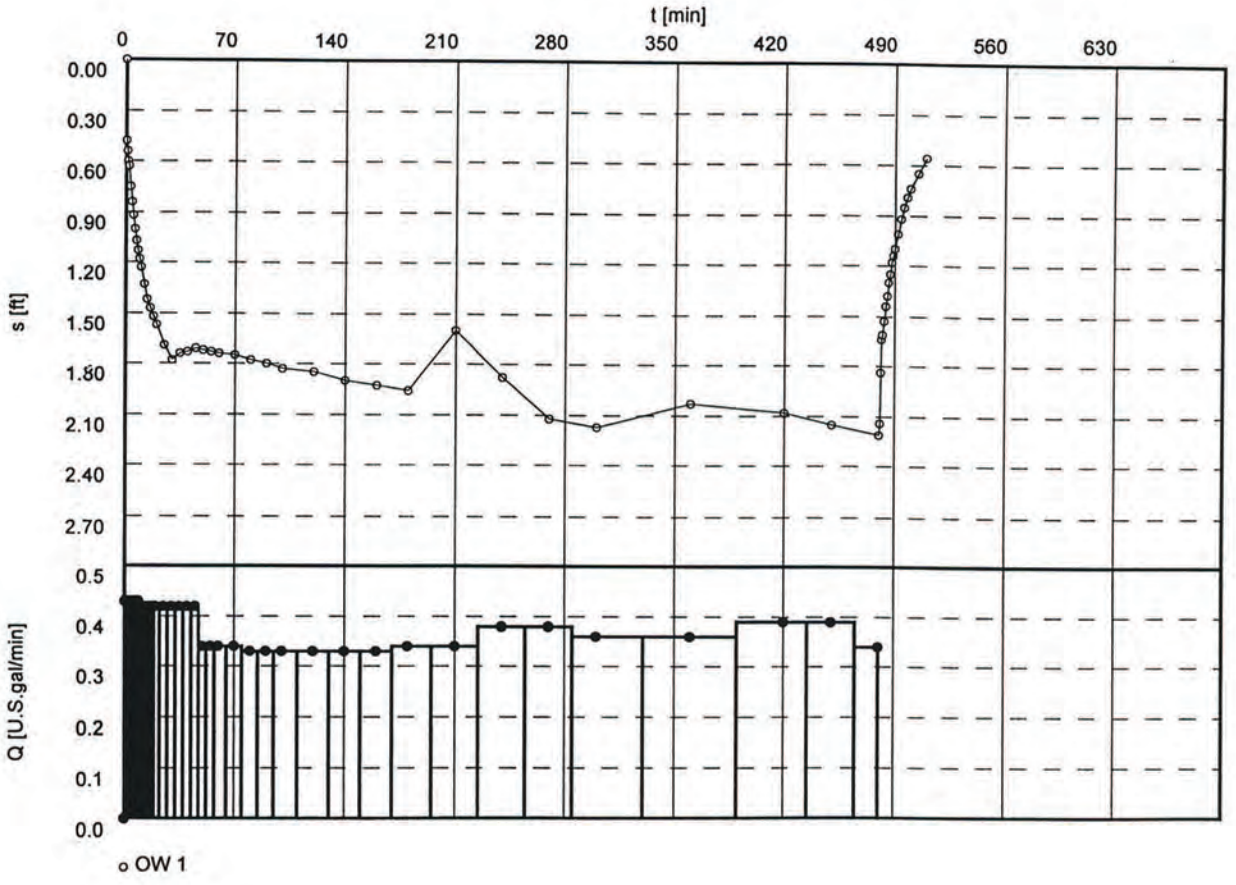
Pumping Test No.	Test conducted on: 16 May 2000
OW 1	
Discharge 0.36 U.S.gal/min	

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 E

Groundwater Sampling Laboratory Analytical Report
23 April 2019

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Sunoco c/o Mulry & Cresswell
1679 Horseshoe Pike
Glenmoore PA 19343

Report Date: April 30, 2019 17:27

Project: 00051078 Philadelphia - 2899 Holme Ave

Account #: 08474
Group Number: 2040857
PO Number: PHILADELPHIA
State of Sample Origin: PA

Electronic Copy To	Mulry & Cresswell Env.	Attn: Stephanie Skelonis
Electronic Copy To	Mulry & Cresswell Env.	Attn: James Mulry

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
MW-1 Groundwater	04/23/2019 13:45	1043343
MW-2 Groundwater	04/23/2019 15:35	1043344
MW-3 Groundwater	04/23/2019 12:05	1043345
MW-4 Groundwater	04/23/2019 12:45	1043346
MW-5 Groundwater	04/23/2019 14:45	1043347
MW-6 Groundwater	04/23/2019 15:10	1043348
MW-7 Groundwater	04/23/2019 13:25	1043349
MW-8 Groundwater	04/23/2019 14:20	1043350

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **MW-1 Groundwater**
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 162017-A1

Project Name: **00051078 Philadelphia - 2899 Holme Ave**

Submittal Date/Time: 04/25/2019 15:36
Collection Date/Time: 04/23/2019 13:45

Sunoco c/o Mulry & Cresswell
ELLE Sample #: GW 1043343
ELLE Group #: 2040857
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10945	Benzene	71-43-2	6	1	0.2	1
10945	Ethylbenzene	100-41-4	< 1	1	0.2	1
10945	Isopropylbenzene	98-82-8	< 5	5	0.3	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	< 1	1	0.2	1
10945	Naphthalene	91-20-3	21	10	4	1
10945	Toluene	108-88-3	< 1	1	0.2	1
10945	Xylene (Total)	1330-20-7	< 5	5	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	UST BTEX/MTBE/Naph/Cumene 8260	SW-846 8260B	1	Z191192AA	04/29/2019 23:29	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z191192AA	04/29/2019 23:28	Hu Yang	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-2 Groundwater**
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 162017-A1

Project Name: **00051078 Philadelphia - 2899 Holme Ave**

Submittal Date/Time: 04/25/2019 15:36
Collection Date/Time: 04/23/2019 15:35

Sunoco c/o Mulry & Cresswell
ELLE Sample #: GW 1043344
ELLE Group #: 2040857
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10945	Benzene	71-43-2	< 1	1	0.2	1
10945	Ethylbenzene	100-41-4	< 1	1	0.2	1
10945	Isopropylbenzene	98-82-8	< 5	5	0.3	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	< 1	1	0.2	1
10945	Naphthalene	91-20-3	< 10	10	4	1
10945	Toluene	108-88-3	< 1	1	0.2	1
10945	Xylene (Total)	1330-20-7	< 5	5	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	UST BTEX/MTBE/Naph/Cumene 8260	SW-846 8260B	1	Z191192AA	04/29/2019 23:53	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z191192AA	04/29/2019 23:52	Hu Yang	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-3 Groundwater**
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 162017-A1

Project Name: **00051078 Philadelphia - 2899 Holme Ave**

Submittal Date/Time: 04/25/2019 15:36
Collection Date/Time: 04/23/2019 12:05

Sunoco c/o Mulry & Cresswell
ELLE Sample #: GW 1043345
ELLE Group #: 2040857
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10945	Benzene	71-43-2	< 1	1	0.2	1
10945	Ethylbenzene	100-41-4	< 1	1	0.2	1
10945	Isopropylbenzene	98-82-8	< 5	5	0.3	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	< 1	1	0.2	1
10945	Naphthalene	91-20-3	< 10	10	4	1
10945	Toluene	108-88-3	< 1	1	0.2	1
10945	Xylene (Total)	1330-20-7	< 5	5	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	UST BTEX/MTBE/Naph/Cumene 8260	SW-846 8260B	1	Z191192AA	04/30/2019 00:17	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z191192AA	04/30/2019 00:16	Hu Yang	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-4 Groundwater**
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 162017-A1

Project Name: **00051078 Philadelphia - 2899 Holme Ave**

Submittal Date/Time: 04/25/2019 15:36
Collection Date/Time: 04/23/2019 12:45

Sunoco c/o Mulry & Cresswell
ELLE Sample #: GW 1043346
ELLE Group #: 2040857
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10945	Benzene	71-43-2	< 1	1	0.2	1
10945	Ethylbenzene	100-41-4	< 1	1	0.2	1
10945	Isopropylbenzene	98-82-8	< 5	5	0.3	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	< 1	1	0.2	1
10945	Naphthalene	91-20-3	< 10	10	4	1
10945	Toluene	108-88-3	< 1	1	0.2	1
10945	Xylene (Total)	1330-20-7	< 5	5	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	UST BTEX/MTBE/Naph/Cumene 8260	SW-846 8260B	1	Z191192AA	04/30/2019 00:41	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z191192AA	04/30/2019 00:40	Hu Yang	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-5 Groundwater**
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 162017-A1

Project Name: **00051078 Philadelphia - 2899 Holme Ave**

Submittal Date/Time: 04/25/2019 15:36
Collection Date/Time: 04/23/2019 14:45

Sunoco c/o Mulry & Cresswell
ELLE Sample #: GW 1043347
ELLE Group #: 2040857
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10945	Benzene	71-43-2	< 1	1	0.2	1
10945	Ethylbenzene	100-41-4	< 1	1	0.2	1
10945	Isopropylbenzene	98-82-8	< 5	5	0.3	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	22	1	0.2	1
10945	Naphthalene	91-20-3	< 10	10	4	1
10945	Toluene	108-88-3	< 1	1	0.2	1
10945	Xylene (Total)	1330-20-7	< 5	5	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	UST BTEX/MTBE/Naph/Cumene 8260	SW-846 8260B	1	Z191192AA	04/30/2019 01:06	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z191192AA	04/30/2019 01:05	Hu Yang	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-6 Groundwater**
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 162017-A1

Project Name: **00051078 Philadelphia - 2899 Holme Ave**

Submittal Date/Time: 04/25/2019 15:36
Collection Date/Time: 04/23/2019 15:10

Sunoco c/o Mulry & Cresswell
ELLE Sample #: GW 1043348
ELLE Group #: 2040857
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10945	Benzene	71-43-2	< 1	1	0.2	1
10945	Ethylbenzene	100-41-4	< 1	1	0.2	1
10945	Isopropylbenzene	98-82-8	< 5	5	0.3	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	12	1	0.2	1
10945	Naphthalene	91-20-3	< 10	10	4	1
10945	Toluene	108-88-3	< 1	1	0.2	1
10945	Xylene (Total)	1330-20-7	< 5	5	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	UST BTEX/MTBE/Naph/Cumene 8260	SW-846 8260B	1	Z191192AA	04/30/2019 01:30	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z191192AA	04/30/2019 01:29	Hu Yang	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-7 Groundwater**
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 162017-A1

Project Name: **00051078 Philadelphia - 2899 Holme Ave**

Submittal Date/Time: 04/25/2019 15:36
Collection Date/Time: 04/23/2019 13:25

Sunoco c/o Mulry & Cresswell
ELLE Sample #: GW 1043349
ELLE Group #: 2040857
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10945	Benzene	71-43-2	< 1	1	0.2	1
10945	Ethylbenzene	100-41-4	< 1	1	0.2	1
10945	Isopropylbenzene	98-82-8	< 5	5	0.3	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	10	1	0.2	1
10945	Naphthalene	91-20-3	< 10	10	4	1
10945	Toluene	108-88-3	< 1	1	0.2	1
10945	Xylene (Total)	1330-20-7	< 5	5	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	UST BTEX/MTBE/Naph/Cumene 8260	SW-846 8260B	1	Z191192AA	04/30/2019 01:54	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z191192AA	04/30/2019 01:53	Hu Yang	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-8 Groundwater**
2899 Holme Avenue - Philadelphia, PA
DUNS# 00051078 COC: 162017-A1

Project Name: **00051078 Philadelphia - 2899 Holme Ave**

Submittal Date/Time: 04/25/2019 15:36
Collection Date/Time: 04/23/2019 14:20

Sunoco c/o Mulry & Cresswell
ELLE Sample #: GW 1043350
ELLE Group #: 2040857
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10945	Benzene	71-43-2	< 1	1	0.2	1
10945	Ethylbenzene	100-41-4	< 1	1	0.2	1
10945	Isopropylbenzene	98-82-8	< 5	5	0.3	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	17	1	0.2	1
10945	Naphthalene	91-20-3	< 10	10	4	1
10945	Toluene	108-88-3	< 1	1	0.2	1
10945	Xylene (Total)	1330-20-7	< 5	5	0.5	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	UST BTEX/MTBE/Naph/Cumene 8260	SW-846 8260B	1	Z191192AA	04/30/2019 02:19	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z191192AA	04/30/2019 02:18	Hu Yang	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Sunoco c/o Mulry & Cresswell
Reported: 04/30/2019 17:27

Group Number: 2040857

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 was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Batch number: Z191192AA	Sample number(s): 1043343-1043350		
Benzene	< 1	1	0.2
Ethylbenzene	< 1	1	0.2
Isopropylbenzene	< 5	5	0.3
Methyl Tertiary Butyl Ether	< 1	1	0.2
Naphthalene	< 10	10	4
Toluene	< 1	1	0.2
Xylene (Total)	< 5	5	0.5

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Z191192AA	Sample number(s): 1043343-1043350								
Benzene	20	19.98			100		80-120		
Ethylbenzene	20	17.69			88		80-120		
Isopropylbenzene	20	18.07			90		80-120		
Methyl Tertiary Butyl Ether	20	20.31			102		69-122		
Naphthalene	20	15.64			78		53-124		
Toluene	20	19.08			95		80-120		
Xylene (Total)	60	60.82			101		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: Z191192AA	Sample number(s): 1043343-1043350 UNSPK: P043227									
Benzene	< 1	20	20.3	20	20.23	102	101	80-120	0	30
Ethylbenzene	< 1	20	17.81	20	17.92	89	90	80-120	1	30
Isopropylbenzene	0.402	20	18.19	20	18.32	89	90	80-120	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Sunoco c/o Mulry & Cresswell
Reported: 04/30/2019 17:27

Group Number: 2040857

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Methyl Tertiary Butyl Ether	< 1	20	18.26	20	18.26	91	91	69-122	0	30
Naphthalene	< 10	20	15.42	20	15.52	77	78	53-124	1	30
Toluene	< 1	20	19.22	20	18.9	96	94	80-120	2	30
Xylene (Total)	< 5	60	55.09	60	54.88	92	91	80-120	0	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: UST BTEX/MTBE/Naph/Cumene 8260
Batch number: Z191192AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1043343	102	100	99	97
1043344	101	101	99	94
1043345	102	99	99	94
1043346	102	101	99	94
1043347	101	100	100	95
1043348	103	101	99	93
1043349	103	100	100	95
1043350	101	98	100	100
Blank	104	100	99	92
LCS	107	102	98	97
MS	101	102	100	99
MSD	101	103	100	96
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

8474/20408571/1043343-51

Page 1 of 1

Chain of Custody Record

On-site Time:	Temp 0.0
Off-site Time:	Temp 0.0
Sky Conditions:	
Meteorological Events:	
Wind Speed: 0.0	Direc

Sunoco DUNS #: 00051078
Region:
State or Lead Regulatory Agency:
Requested Due Date (mm/dd/yy):
COC Tracking Number: 162017-A1

Lab Name:	LANCASTER LABORATORIES INC	Facility Address:	2899 HOLME AVENUE	Consultant/Contractor:	Mulry and Cresswell Env.
Address:		Facility City, State:	PHILADELPHIA PA	Address:	1679 Horseshoe Pike
		Site Lat/Long:	0.0 0.0		Glenmoore PA 19343
Lab PM:		Sunoco PM Contact:		Consultant/Contractor Project No.:	
Tele/Fax:		Address:		Consultant/Contractor PM:	Marco Droese
Report Type & QC Level:				Tele/Fax:	
E-mail EDD To:	SunocoENFOS@deltaenv.com	Tele/Fax:		Invoice to:	

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Liquid	Solid	Gas	Laboratory No.	No. of Containers	Preservative: HCL	Requested Analysis: PA UG 8260B	Sample Point Lat/Long and Comments
1	MW-1	1345	4/23/19	WG				3	X	X	Please analzye for "old list"
2	MW-2	1535		WG				3	X	X	unleaded: BTEX, MTBE,
3	MW-3	1225		WG				3	X	X	Naphth and Cumene only
4	MW-4	1245		WG				3	X	X	
5	MW-5	1445		WG				3	X	X	
6	MW-6	1510		WG				3	X	X	
7	MW-7	1325		WG				3	X	X	
8	MW-8	1420		WG				3	X	X	Hold analysis on
9	TB-1	900						1	X	X	TB-1 Pending Notifi-
10											-cation

Sampler's Name:	S,B,T	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	MCE		4/23/19	1640		4.25.19	1005
Shipment Date:			4.25.19	1536			
Shipment Method:							
Shipment Tracking No:					ELLE	4/25/19	1536

Special Instructions:

Custody Seals In Place Yes No X | Temp Blank Yes X No | Cooler Temperature on Receipt 1.6 OF/C | Trip Blank Yes X No

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Sample Administration Receipt Documentation Log

Doc Log ID: 247368

Group Number(s): 2040857

Client: Sunoco c/o Mulry & Cresswell

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Timestamp:	04/25/2019 15:36
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	No
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	Yes
Paperwork Enclosed:	Yes	VOA IDs (≥ 6mm):	See Below
Samples Intact:	Yes	Total Trip Blank Qty:	1
Missing Samples:	No	Trip Blank Type:	HCl
Extra Samples:	No	Air Quality Samples Present:	No
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace ≥ 6mm): 1 HCl Tripblank

Unpacked by Nicole Reiff (25684) at 09:24 on 04/26/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.6	DT	Wet	Y	Bagged	N

Sample ID Discrepancy Details

Sample ID on COC	Sample ID on Label	Comments
MW-8	OW-8	
MW-4	OW-4	
MW-6	OW-6	
MW-7	OW-7	
MW-2	OW-2	
MW-1	OW-1	
MW-3	OW-3	

2425 New Holland Pike
Lancaster, PA 17605-2425

T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report
B	Detection in the Blank
Q0	LCS/LCSD Low
Q1	LCS/LCSD High
Q2	MS/MSD Low
Q3	MS/MSD High
Q7	LCS/LCSD RPD
Q8	DUP RPD
Q9	MS/MSD RPD

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

APPENDIX F

PNDI Environmental Review

1. PROJECT INFORMATION

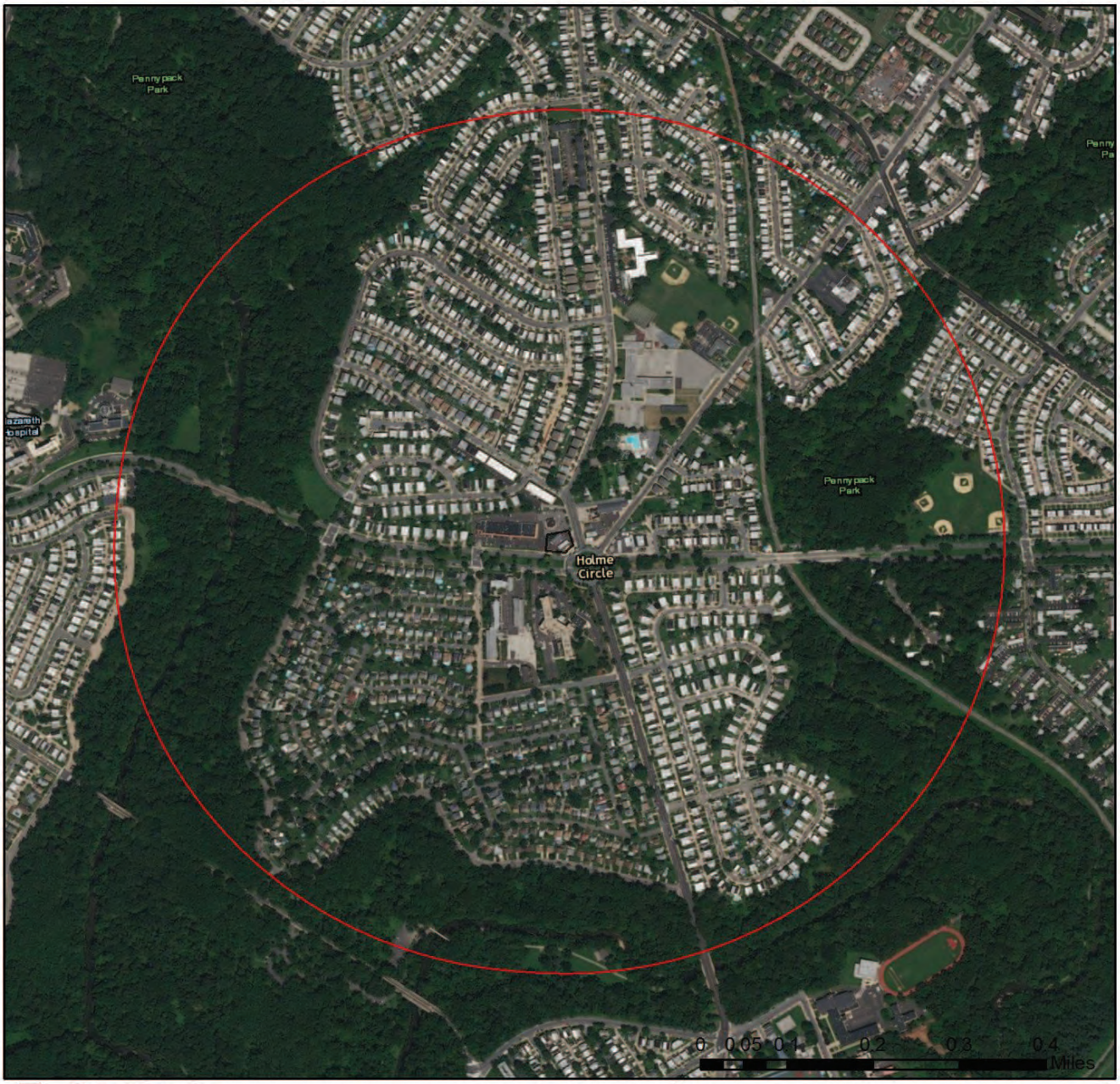
Project Name: **Holme Ave**
Date of Review: **9/4/2019 01:05:38 AM**
Project Category: **Hazardous Waste Clean-up, Site Remediation, and Reclamation, Spill (e.g., oil, chemical)**
Project Area: **0.41 acres**
County(s): **Philadelphia**
Township/Municipality(s): **PHILADELPHIA**
ZIP Code: **19152**
Quadrangle Name(s): **FRANKFORD**
Watersheds HUC 8: **Lower Delaware**
Watersheds HUC 12: **Lower Pennypack Creek**
Decimal Degrees: **40.056925, -75.029263**
Degrees Minutes Seconds: **40° 3' 24.9296" N, 75° 1' 45.3475" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	**Conservation Measure**	**No Further Review Required, See Agency Comments**
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.

Holme Ave

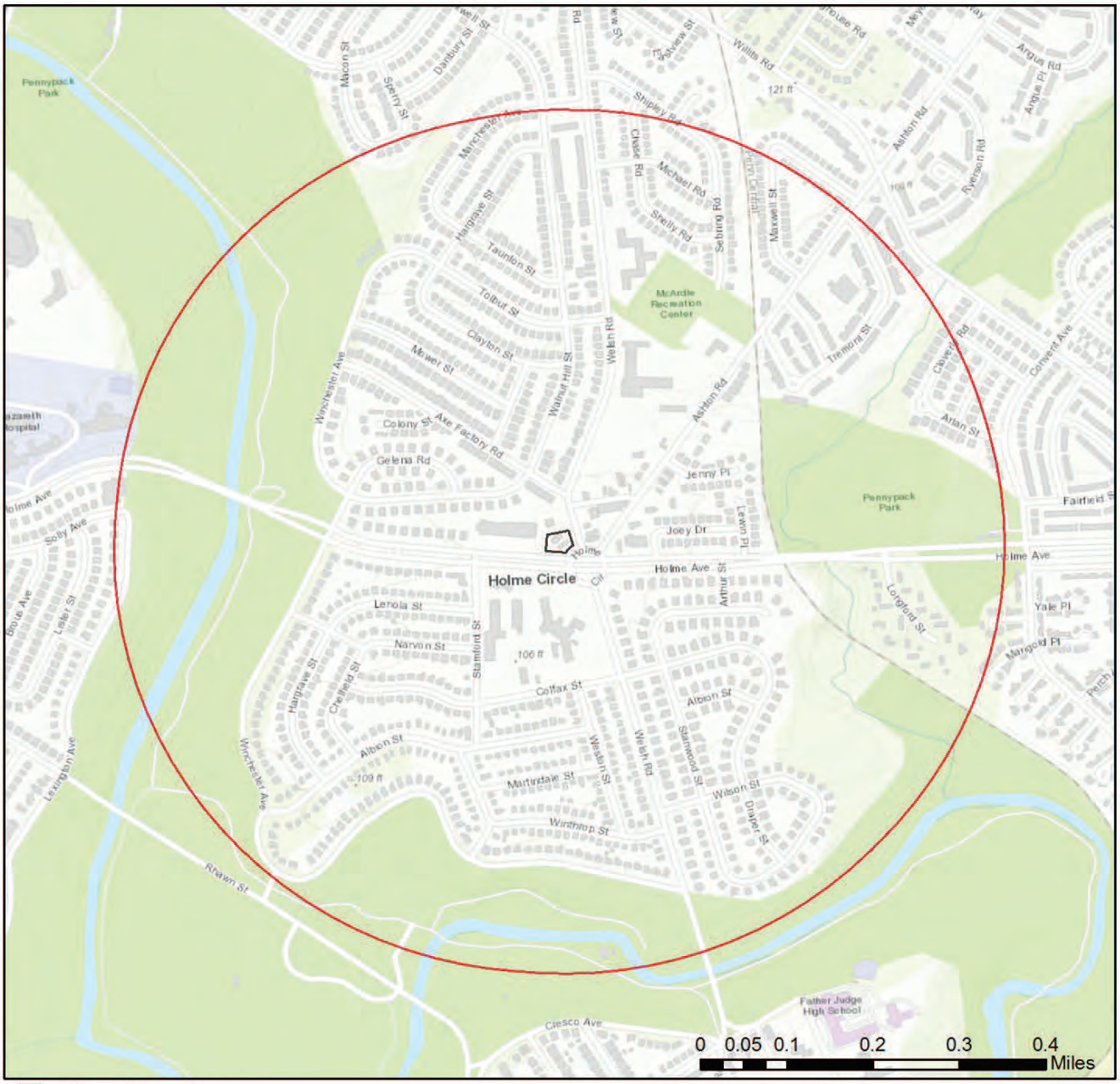


Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Holme Ave



Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS,

RESPONSE TO QUESTION(S) ASKED

Q1: Will the entire project area (including any discharge), plus a 300 feet buffer around the project area, all occur in or on an existing building, parking lot, driveway, road, road shoulder, street, runway, paved area, railroad bed, maintained (periodically mown) lawn, crop agriculture field or maintained orchard?
Your answer is: Yes

Q2: Aquatic habitat (stream, river, lake, pond, etc.) is located on or adjacent to the subject property and project activities (including discharge) may occur within 300 feet of these habitats?
Your answer is: No

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 jurisdictional 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:

Conservation Measure: Please avoid the introduction of invasive species in order to protect the integrity of nearby plant species of special concern. Voluntary cleaning of equipment/vehicles, using clean fill and mulch, and avoiding planting invasive species (http://www.dcnr.pa.gov/Conservation/WildPlants/InvasivePlants/Pages/default.aspx) will help to conserve sensitive plant habitats.

DCNR 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. After desktop review, if a botanical survey is required by DCNR, we recommend the DCNR Botanical Survey Protocols, available here: https://conservationexplorer.dcnr.pa.gov/content/survey-protocols)

Scientific Name	Common Name	Current Status	Proposed Status	Survey Window
Quercus phellos	Willow Oak	Endangered	Endangered	Leaves distinctive

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
Gasterosteus aculeatus	Threespine Stickleback	Endangered

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). 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. Alternatively, applicants may email or mail their project materials (see AGENCY CONTACT INFORMATION).
***Note:** U.S.Fish and Wildlife Service requires applicants to mail project materials to the USFWS PA field office (see AGENCY CONTACT INFORMATION). USFWS will not accept project materials submitted electronically (by upload or email).

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
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 Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Stephanie Skelonis
Company/Business Name: Mulry and Cresswell Environmental
Address: 1679 Horseshoe Pike
City, State, Zip: Glenmoore, PA 19343
Phone: (610) 942-9010 Fax: (610) 9429057
Email: stephanie-skelonis@mcenvironmental.com

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

9/4/19
date

pennsylvania
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

BUREAU OF FORESTRY

Date: September 11, 2019

PNDI Number: 692946
Version: Final_1; 9/4/2019

Stephanie Skelonis
Mulry and Cresswell Environmental
1679 Horseshoe Pike
Glenmore, PA 19343

Email: stephanie_skelonis@mcenvironmental.com (hard copy with not follow)

Re: Holme Ave. (Hazardous Waste Clean-up, Site Remediation and Reclamation)
Township/Municipality: Philadelphia **County: Philadelphia**

Dear Ms. Skelonis,

Thank you for the submission of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Receipt Number **692946** for review. PA Department of Conservation and Natural Resources screened this project for potential impacts to species and resources under DCNR's responsibility, which includes plants, terrestrial invertebrates, natural communities, and geologic features only.

No Impact Anticipated (with Conservation Measure)

PNDI records indicate species or resources under DCNR's jurisdiction are located in the vicinity of the project. However, based on the information you submitted concerning the nature of the project, the immediate location, and our detailed resource information, DCNR has determined that no impact is likely. No further coordination with our agency is needed for this project.

Conservation Measure—Voluntary Action

The following species is in the vicinity of the project area. Please consider the conservation and protection of this species of concern and its habitat when planning future projects.

- *Quercus phellos,* **Willow Oak (Pennsylvania Endangered) – Its habitat is low moist or seasonally wet woods. Leaves are distinctive.**

DCNR recommends the following steps to help prevent the spread of invasive species:

- The area of disturbance should be minimized to the fullest extent that would allow for construction. This will help to lessen the area of soil and vegetation disturbance associated with this project.

- If possible, please clean boot treads, construction equipment, and vehicles thoroughly (especially the undercarriage and wheels) before they are brought on site. This will remove invasive plant seeds and invasive earthworms/cocoons that may have been picked up at other sites.

- Do not transport unsterilized leaves, mulch, compost, or soil to the site from another location. Avoid using seed mixes that include invasive plant species (e.g. crown vetch) to re-vegetate the area. Please also use weed-free straw or

hay mixes when possible. More information about invasive species in Pennsylvania can be found at the following link: *http://www.dcnr.state.pa.us/conservationscience/invasivespecies/index.htm*

This response represents the most up-to-date review of the PNDI data files and is valid for two (2) years only. If project plans change or more information on listed or proposed species becomes available, our determination may be reconsidered. Should the proposed work continue beyond the period covered by this letter, please resubmit the project to this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map). As a reminder, this finding applies to potential impacts under DCNR's jurisdiction only. Visit the PNHP website for directions on contacting the Commonwealth's other resource agencies for environmental review.

Should you have any questions or concerns, please contact Rich Shockey, Ecological Information Specialist, by phone (717-772-0263) or via email (c-rshockey@pa.gov).

Sincerely

Greg Podniesinski, Section Chief
Natural Heritage Section

Pennsylvania Fish & Boat Commission
established 1866

Division of Environmental Services
Natural Diversity Section
595 E Rolling Ridge Dr.
Bellefonte, PA 16823
814-359-5237

October 29, 2019

IN REPLY REFER TO
SIR# 51854

Mulry and Cresswell Environmental, Inc.
Stephanie Skelonis
1679 Horseshoe Pike
Glenmoore, Pennsylvania 19343

RE: Species Impact Review (SIR) – Rare, Candidate, Threatened and Endangered Species
PNDI Search No. 692946_1
Holme Avenue
PHILADELPHIA County: Philadelphia City

Dear Stephanie Skelonis:

This responds to your inquiry about a Pennsylvania Natural Diversity Inventory (PNDI) Internet Database search "potential conflict" or a threatened and endangered species impact review. These projects are screened for potential conflicts with rare, candidate, threatened or endangered species under Pennsylvania Fish & Boat Commission jurisdiction (fish, reptiles, amphibians, aquatic invertebrates only) using the Pennsylvania Natural Diversity Inventory (PNDI) database and our own files. These species of special concern are listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, and the Pennsylvania Fish & Boat Code (Chapter 75), or the Wildlife Code.

An element occurrence of a rare, candidate, threatened, or endangered species under our jurisdiction is known from the vicinity of the proposed project. However, given the nature of the proposed project, the immediate location, or the current status of the nearby element occurrence(s), no adverse impacts are expected to the species of special concern.

This response represents the most up-to-date summary of the PNDI data and our files and is valid for two (2) years from the date of this letter. An absence of recorded species information does not necessarily imply species absence. Our data files and the PNDI system are continuously being updated with species occurrence information. Should project plans change or additional information on listed or proposed species become available, this determination may be reconsidered, and consultation shall be re-initiated.

If you have any questions regarding this review, please contact Doug Fischer at 814-359-5195 and refer to the SIR # 51854. Thank you for your cooperation and attention to this important matter of species conservation and habitat protection.

Sincerely,

Christopher A. Urban, Chief
Natural Diversity Section

CAU/DF/dn