Pennsylvania Transformer Technology, Inc.

2019 Annual Compliance Monitoring Report

Former Tank Farm Area and Building 20/25 Area

Canonsburg, PA

January 2020

2019 Annual Compliance Monitoring Report

Former Tank Farm and Building 20/25 Area
Canonsburg, Pennsylvania

Prepared for:
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Canonsburg, Pennsylvania

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Date:
January 7, 2020

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COMMONWEALTH OF PENNSYLVANIA
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By affixing my seal to this document, I am certifying that to the best of my knowledge the information is true and correct. 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.

Table of Contents

Figures

Tables

Appendices

Acronyms

Act 2	Pennsylvania Land Recycling Act, Title 25, 25 PA Code Chapter 250
CMS	Compliance Monitoring System
COA	Consent Order and Agreement
Cooper	Cooper Industries
DNAPL	Dense non-aqueous phase liquid
DO	Dissolved oxygen
DRO	Diesel Range Organic
ft	feet
GES	Groundwater & Environmental Services, Inc.
GRO	Gasoline Range Organic
LNAPL	light non-aqueous phase liquid
mg/L	milligrams per Liter
MSC	medium-specific concentration
NAPL	Non-aqueous phase liquid
NR/NU	Non-residential/Non-used aquifer
ORP	Oxidation/reduction potential
PA	Pennsylvania
Pace	Pace Analytical Laboratories
PADEP	Pennsylvania Department of Environmental Protection
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethene
PTTI	Pennsylvania Transformer Technology, Inc.
Site	30 Curry Avenue, Canonsburg, Pennsylvania
TPH	Total Petroleum Hydrocarbon
µg/L	Micrograms per Liter
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

1 Introduction

Groundwater & Environmental Services, Inc. (GES) is submitting this report to transmit the results of the 2019 annual compliance groundwater/surface water monitoring event conducted at the Pennsylvania Transformer Technology, Inc. (PTTI), Canonsburg, Pennsylvania Facility (Site) during November 2019. The Site location map is shown on **Figure 1**.

Sampling was completed in accordance with the 1993 Compliance Monitoring System (CMS) Plan as modified by exhibit K-1 of the June 29, 2001, Consent Order and Agreement (COA) between the Pennsylvania Department of Environmental Protection (PADEP), Cooper Industries (Cooper), and PTTI. The requested laboratory analyses were performed in accordance with a new COA between PADEP and PTTI executed on April 14, 2005, that included revisions to the analytical parameter list as identified in paragraph 13 and Exhibits D and G of the April 14, 2005, COA.

Under the terms of the COA, PTTI is to provide PADEP with relevant information and data collected during the semi-annual and annual monitoring events at the Former Tank Farm and Building 20/25 Areas related to the groundwater recovery/remediation system. The two areas are shown on **Figures 2** and **3**, respectively, along with the monitoring well locations and topography. Quarterly compliance groundwater monitoring was initiated at the Former Tank Farm and Building 20/25 Areas during the second quarter of 1992. The scope of work and data are discussed below. The groundwater analytical data are compared to the Pennsylvania Land Recycling Act (Act 2) Non-Residential, Non-Use Aquifer Medium-Specific Concentrations (NR/NU MSC).

2 Sample Collection and Analyses

The sampling event was completed on November 11 through November 13, 2019. **Table 1** identifies the wells in the Former Tank Farm Area and **Table 2** identifies the wells in the Building 20/25 Area that are part of the compliance monitoring network. These tables also present relevant well construction details along with groundwater elevation data, the thickness of any non-aqueous phase liquids (NAPL) detected, and, whether a sample was collected during this event.

Groundwater sampling proceeded in the following manner:

Groundwater levels from monitoring wells in the Former Tank Farm and Building 20/25 Areas were measured using an oil/water interface probe capable of detecting the presence of light non-aqueous phase liquids or (LNAPL) or dense non-aqueous phase liquids (DNAPL). The data are summarized on **Tables 1** and **2**, respectively.

At locations where LNAPL or DNAPL were not detected, three well volumes were purged from wells to be sampled using a dedicated bailer at each location. Deep bedrock wells in the Building 20/25 area were purged with a submersible pump that was decontaminated prior to each use. One shallow bedrock well in the Building 20/25 area was purged with a peristaltic pump. Purge and decontamination water was placed into containers provided and disposed of by PTTI. If a sheen or evidence of NAPL was observed during purging, the well was not sampled. Data are

presented on the Field Forms in **Appendix A** and **B**, for the Former Tank Farm and Building 20/25 areas, respectively.

During purging, field measurements including temperature, pH, specific conductance, oxidation/reduction potential (ORP), and dissolved oxygen (DO), were collected from wells which did not exhibit NAPL. Data is provided on Field Forms in **Appendix A** and **B**.

Collected samples were placed into appropriately preserved containers provided by Pace Analytical Laboratories (Pace) of Greensburg, Pennsylvania (PA Certification # 65-00282). The samples were delivered to Pace using their courier service following routine chain of custody procedures. Copies of the completed chain of custody documentation are included with the final laboratory analytical reports for the Former Tank Farm Area in **Appendix C** and the Building 20/25 Area in **Appendix D**. Laboratory analytical reports for surface water samples collected are provided in **Appendix E**.

Pace analyzed the groundwater samples for:

- Volatile Organic Compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260B.
- Polychlorinated Biphenyl Compounds (PCBs) by USEPA Method 8082A.
- Total Petroleum Hydrocarbon (TPH) Diesel Range Organic Compounds (DRO) and Gasoline Range Organic Compounds (GRO) by USEPA Methods 8015D and 5030/8015B, respectively.
- Chlordane by USEPA Method 8081B.

Seven of the ten wells in the Tank Farm Area overburden aquifer contained a detectable presence of NAPL/sheen or other prohibitive condition noted on **Table 1** that excluded them from sampling. The remaining three wells, PZ-5, PZ-13, and PZ-21 could be sampled during the 2019 annual event. A duplicate sample was also collected from PZ-5. As noted on **Table 1**, the "additional location" wells were not scheduled for annual sampling.

Wells sampled in the Building 20/25 Area are completed in the overburden, shallow bedrock, and deep Bedrock aquifers are as follows and listed on **Table 2**:

- *Overburden Wells*: Nine wells were scheduled for sampling; however, only two samples were collected due to the presence of NAPL, or the well was considered lost. Wells sampled were MW-S1 and MW-S8.
- *Shallow Bedrock Wells*: Ten wells were scheduled for sampling; however, only five samples were collected due to the presence of NAPL or the well was considered lost. Wells sampled included MW-D1, PZ-D2, MW-D4, PZ-D7, and MW-D16.
- *Deep Bedrock Wells*: Four wells were scheduled for sampling, all of which were sampled. Samples were collected from MW-9, MW-11, MW-12, and PZ-D14. An equipment blank sample was collected from MW-9.

In addition to sampling groundwater, surface water samples were collected from three locations in Chartiers Creek identified on **Figure 3** as Upstream No. 1, Upstream No. 2, and Downstream. Field forms are provided in **Appendix B**. These samples were collected from the creek bank by

lowering the appropriate container provided by Pace into the water. The surface water samples were submitted to Pace along with the groundwater samples and were analyzed for:

- VOCs by USEPA Method 8260B.
- PCBs by USEPA Method 8082A.
- TPH-DRO and TPH-GRO by USEPA Methods 8015D and 5030/8015B, respectively.

The results of the sampling event are discussed below.

3 Results

The following sections present the field observations and analytical data from the November 2019 event for the Former Tank Farm and Building 20/25 Areas, respectively.

3.1 Former Tank Farm Area

3.1.1 Former Tank Farm Area Field Observations

The depth to groundwater with corresponding elevation and LNAPL thickness data are summarized on **Table 1**. **Figure 4** illustrates the groundwater contours and LNAPL thickness for the overburden aquifer and **Figure 5** illustrates the groundwater contours and LNAPL thickness for the shallow bedrock aquifer. **Figure 6** illustrates the LNAPL thickness for the wells referred to as “Additional Locations”. DNAPL was not detected at any of the gauged locations.

Groundwater flow direction in the overburden aquifer is to the southeast and to the south in the shallow bedrock aquifer. November 2019 groundwater elevations and flow directions are generally consistent with those observed during previous events.

As identified on **Table 1** and **Figure 4**, sheen or measurable LNAPL was observed in 10 of the 16 overburden monitoring wells. The maximum LNAPL thickness observed during the November 2019 event was 0.52 feet (ft) in well PZ-17. The wells in which LNAPL was detected are generally consistent with those in which LNAPL was detected in May 2019, with the exception of PZ-2, PZ-4, PZ-15, where a sheen was observed in May 2019 but not observed in November 2019. A sheen was observed in November 2019 at PZ-22, but was not observed in May 2019.

As identified on **Table 1** and **Figure 5**, no sheen or LNAPL was observed in shallow bedrock aquifer well PZ-4D, while a sheen was observed in PZ-2D and PZ-13D. No sheen or LNAPL was identified during the May 2019 event. As identified on **Table 1** and **Figure 6**, sheen or LNAPL was not detected in three of the four additional locations. A thickness of 0.13 ft of LNAPL was observed at OW-2 where a LNAPL thickness of 0.15 ft was observed in May 2019.

3.1.2 Former Tank Farm Area Analytical Data

Samples were collected from overburden aquifer wells PZ-5, PZ-13, and PZ-21. The summary of detected analytes is provided on **Table 3** and **Figure 7**. Copies of the final laboratory analytical reports are included in **Appendix C** and the results are discussed below:

PCBs: Aroclor 1260 was detected in all three samples. A concentration above the Act 2 NR/NU MSC of 1.7 µg/L was reported in PZ-13 (6.0 µg/L).

TPH: No MSCs have been developed for TPH. DRO TPH was detected in PZ-5 (0.59 mg/L), PZ-13 (0.44 mg/L), and PZ-21(2.6 mg/L). TPH GRO was not detected.

VOCs: A concentration of 198 µg/L tetrachloroethene (PCE) was reported in the groundwater sample collected from PZ-5, which is above the Act 2 NR/NU MSC of 50 µg/L. Vinyl chloride was also reported in the sample from PZ-5 (20.8 µg/L) at a concentration above the Act 2 NR/NU MSC of 20 µg/L. Other VOCs that were detected in the samples are typically associated with the natural degradation of PCE, but the concentrations were below their respective MSCs. Methylene chloride was detected in wells PZ-5 and PZ-13. Methylene chloride is a common laboratory solvent and laboratory contaminant.

Chlordane: Chlordane was not detected in any sample.

The original and duplicate sample results from PZ-5 were similar. All bottleware that was analyzed for VOCs from the Former Tank Farm, Building 20/25 areas including surface water samples, were packaged in the same cooler and only one trip blank was analyzed for both areas per day. Methylene chloride was reported in both of the associated trip blanks, which is a known laboratory contaminant and likely introduced during laboratory preparation and/or analysis of the sample. The presence of methylene chloride could also be attributed to the deionized water used to generate the sample. The analytical data are generally consistent with those from the May 2019 event.

3.2 Building 20/25 Area

3.2.1 Building 20/25 Field Observations

The depth to groundwater with corresponding elevation and LNAPL thickness data are summarized on **Table 2**. **Figures 8**, **9**, and **10** illustrate the groundwater elevation contours and LNAPL thickness for the overburden, shallow bedrock, and deep bedrock aquifers, respectively. Groundwater flow in each of the aquifers is generally to the southeast towards Chartiers Creek. Significant pumping influence is typically observed when overburden recovery well MW-S5/RS-5 is gauged and incorporated into groundwater elevation contours. The influence of pumping from MW-S5/RS-5 on the overburden aquifer is illustrated on **Figure 8**.

NAPL measurements recorded from the three aquifers are listed on **Table 2** and summarized below:

- *Overburden Aquifer*: Sheen or measurable LNAPL was observed in four of the eight overburden wells. The maximum thickness was 0.34 ft observed at MW-S16. Well MW-S10 could not be sampled due to construction activities.
- *Shallow Bedrock Aquifer*: A sheen was observed in three of the nine shallow bedrock wells. DNAPL was not observed in monitoring well MW-D8 as observed in May 2019.
- *Deep Bedrock Aquifer*: A sheen or measurable LNAPL was not observed in any of the four deep bedrock wells.

The groundwater flow direction and occurrence of NAPL is generally consistent with observations from previous events.

3.2.2 Building 20/25 Analytical Data

Groundwater samples were collected from the overburden (two samples), shallow bedrock (five samples), and deep bedrock (four samples) aquifers as identified on **Table 2**. A summary of detected analytes is presented on **Table 4** and **Figures 11**, **12**, and **13** for the overburden, shallow bedrock, and deep bedrock aquifers, respectively. Copies of the laboratory analytical reports are provided in **Appendix D**. The data are summarized below:

PCBs: Aroclor 1260 was detected in 7 of the 11 samples. Concentrations above the Act 2 NR/NU MSC of 1.7 µg/L were reported in MW-S1 (2.8 µg/L) and MW-S8 (27.1 µg/L) in the overburden aquifer, MW-D4 (20.1 µg/L) and MW-D16 (444 µg/L) in the shallow bedrock aquifer, and MW-11 (3.1 µg/L) in the deep bedrock aquifer.

TPH: TPH-GRO was not detected in any of the samples. TPH-DRO was detected in overburden wells MW-S1 and MW-S8, shallow bedrock wells MW-D1, MW-D4, PZ-D7, and MW-D16, and deep bedrock well MW-11. The maximum detected concentration was 2.1 mg/L in well MW-16. There is no Act 2 MSC for TPH-DRO.

VOCs: VOCs were detected in overburden well MW-S8, shallow bedrock wells MW-D1, MW-D4, PZ-D7, MW-D16, and deep bedrock well MW-11. Vinyl chloride was detected at a concentration of 184 µg/L in shallow bedrock well MW-D16, which is above the MSC of 20 µg/L. This was the only reported vinyl chloride concentration above the Act 2 NR/NU MSC. Methylene chloride, a common laboratory contaminant, was detected in 4 of the 11 samples.

Chlordane: Chlordane was detected in shallow bedrock well MW-D1 (0.35 µg/L) at a concentration below the Act 2 NR/NU MSC of 56 µg/L.

The field equipment blank and field blank both reported a detection of methylene chloride at 1.0 µg/L and 1.5 µ/L, respectively. A duplicate was not collected from the Building 20/25 area. All bottleware that was analyzed for VOCs from the Former Tank Farm and Building 20/25 areas, including surface water samples, were packaged in the same cooler and one trip blank was analyzed for both areas per day. Trip blank results were previously discussed in **Section 3.1.2**.

3.3 Surface Water Sample Results

The surface water data are summarized on **Table 4** and **Figure 11**. Laboratory analytical reports are provided in **Appendix E**. Cis-1,2-CDE (1.1 µg/l) was detected in the upstream No. 1 sample collected from Chartiers Creek.

4 Conclusions and Recommendations

GES completed the 2019 annual compliance monitoring event on November 11, November 12 and November 13, 2019. Field observations including NAPL detection and analytical data from

this monitoring event are generally consistent with those from the May 2019 and November 2018 events.

The following analytes were detected in groundwater samples at concentrations above their respective Act 2 NR/NU MSCs:

Former Tank Farm Area

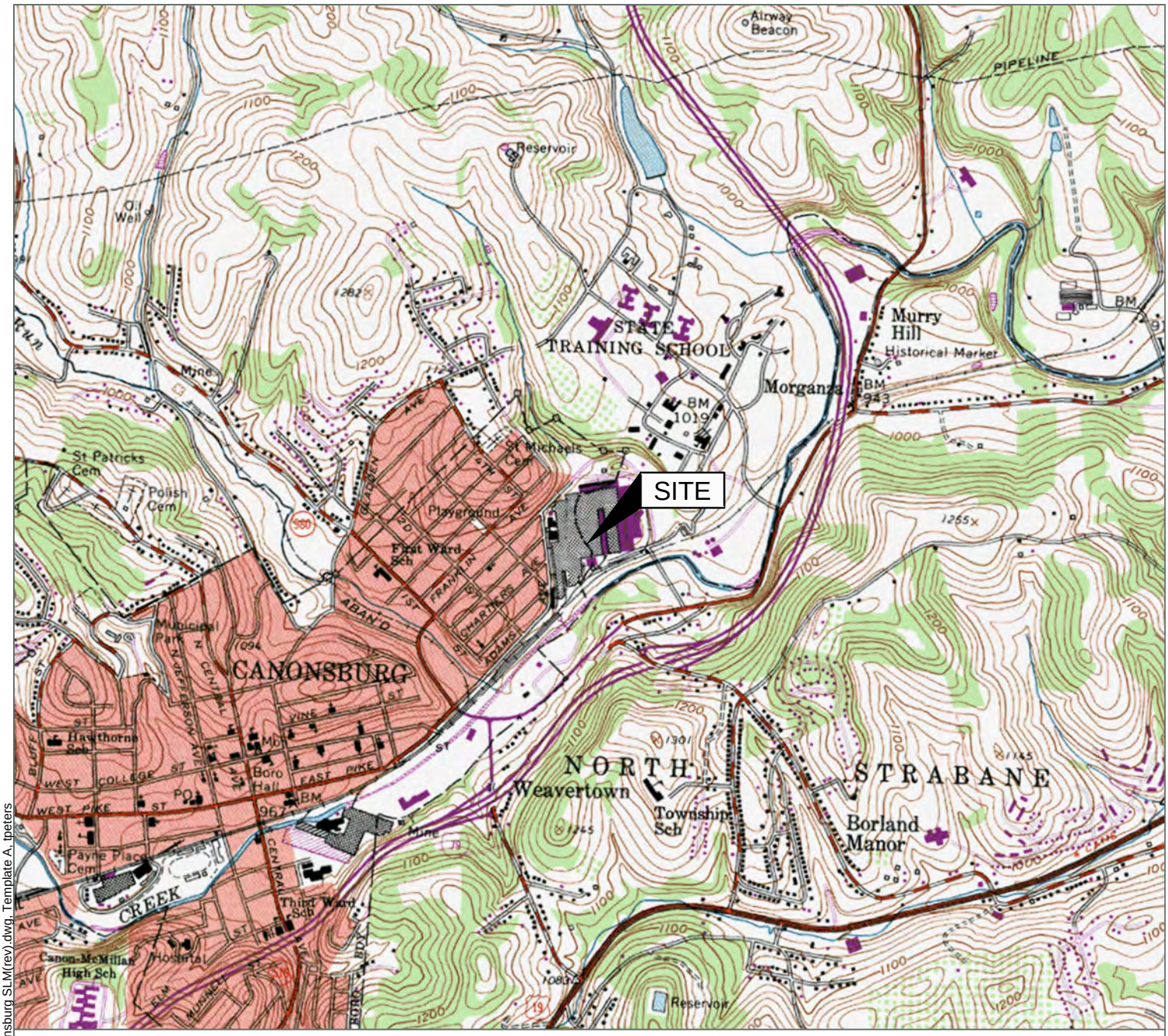
PCE was detected in the sample collected from PZ-5 at a concentration of 198 µg/L, which is above the Act 2 NR/NU MSC of 50 µg/L. Vinyl chloride was also detected in PZ-5 (20.8 µg/L) at a concentration above the Act 2 NR/NU MSC of 20 µg/L. Aroclor 1260 was detected at a concentration of 6.0 µg/L in the sample collected from PZ-13, which is above the Act 2 NR/NU MSC of 1.7 µg/L. No other analytes were detected at concentrations above their respective Act 2 NR/NU MSC.

Building 20/25 Area

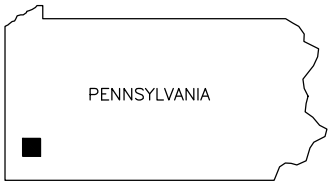
PCB concentrations in groundwater above the Act 2 NR/NU MSC of 1.7 µg/L were detected in overburden aquifer samples MW-S1 (2.8 µg/L) and MW-S8 (27.1 µg/L), shallow bedrock aquifer samples MW-D4 (20.1 µg/L) and MW-D16 (444 µg/L), and deep bedrock aquifer sample MW-11 (3.1 µg/L). Vinyl chloride was detected in the sample collected from MW-D16 in the shallow bedrock with a concentration of 184 µg/L, which is above the Act 2 NR/NU MSC of 20 µg/L. No other analytes were detected at a concentration above their respective Act 2 NR/NU MSC.

Based on these results, no modification to the established compliance monitoring program is necessary. GES recommends proceeding with the next regularly scheduled semi-annual monitoring event in May 2020.

Figures



Source:
USGS 7.5 Minute Series
Topographic Quadrangle, 1960 (1979)
Canonsburg, Pennsylvania
Contour Interval = 20'



Site Location Map

Pennsylvania Transformer Technology, Inc.
Canonsburg, Pennsylvania

Drawn
T.P.
Designed
J.S.
Approved
E.L.

Date
01/05/18
Figure
1

N

Scale In Feet
0 2000

GES
Groundwater & Environmental Services, Inc.

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Site Map

Former Tank Farm Area
Pennsylvania Transformer Technology, Inc.
Canonsburg, Pennsylvania

Drawn **GKS**
Designed **DMC**
Approved **EML**

Date **7/12/19**
Figure **2**

Scale In Feet (Approximate)
0 150

Groundwater & Environmental Services, Inc.

Site Map

Building 20/25 Area
Pennsylvania Transformer Technology, Inc.
Canonsburg, Pennsylvania

Drawn: GKS
Designed: DMC
Approved: EML
Date: 7/16/19
Figure: 3

Scale In Feet (Approximate)
0 80

Groundwater & Environmental Services, Inc.

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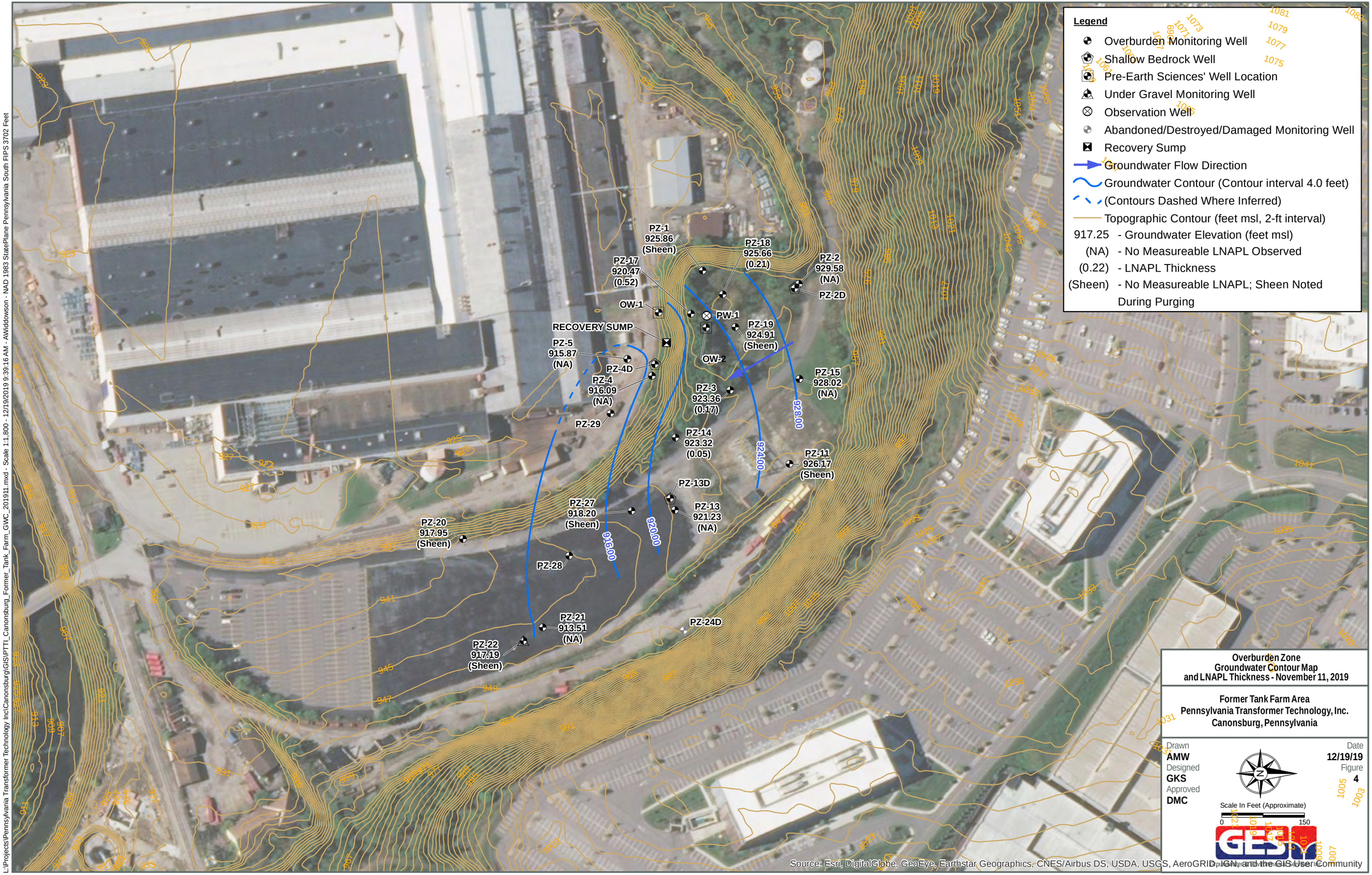

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Shallow Bedrock Zone
Groundwater Contour Map
and LNAPL Thickness - November 11, 2019

Former Tank Farm Area
Pennsylvania Transformer Technology, Inc.
Canonsburg, Pennsylvania

Drawn	Date
AMW	12/16/19
Designed	Fig.
GKS	5
Approved	
DMC	

Scale In Feet (Approximate)
0 150

Groundwater & Environmental Services, Inc.

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Legend

- Overburden Monitoring Well
- Shallow Bedrock Well
- Pre-Earth Sciences' Well Location
- Under Gravel Monitoring Well
- Observation Well
- Abandoned/Destroyed/Damaged Monitoring Well
- Recovery Sump
- Topographic Contour (feet msl, 2-ft interval)
- (NA) - No Measureable LNAPL Observed
- (0.13) - LNAPL Thickness

PZ-1
PZ-2
PZ-2D
PZ-3
PZ-4
PZ-4D
PZ-5
PZ-11
PZ-13
PZ-13D
PZ-14
PZ-15
PZ-17
PZ-18
PZ-19
PZ-20
PZ-21
PZ-22
PZ-24D
PZ-27
PZ-28
PZ-29
OW-1 (NA)
OW-2 (0.13)
PW-1 (NA)
RECOVERY SUMP (NA)

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USG

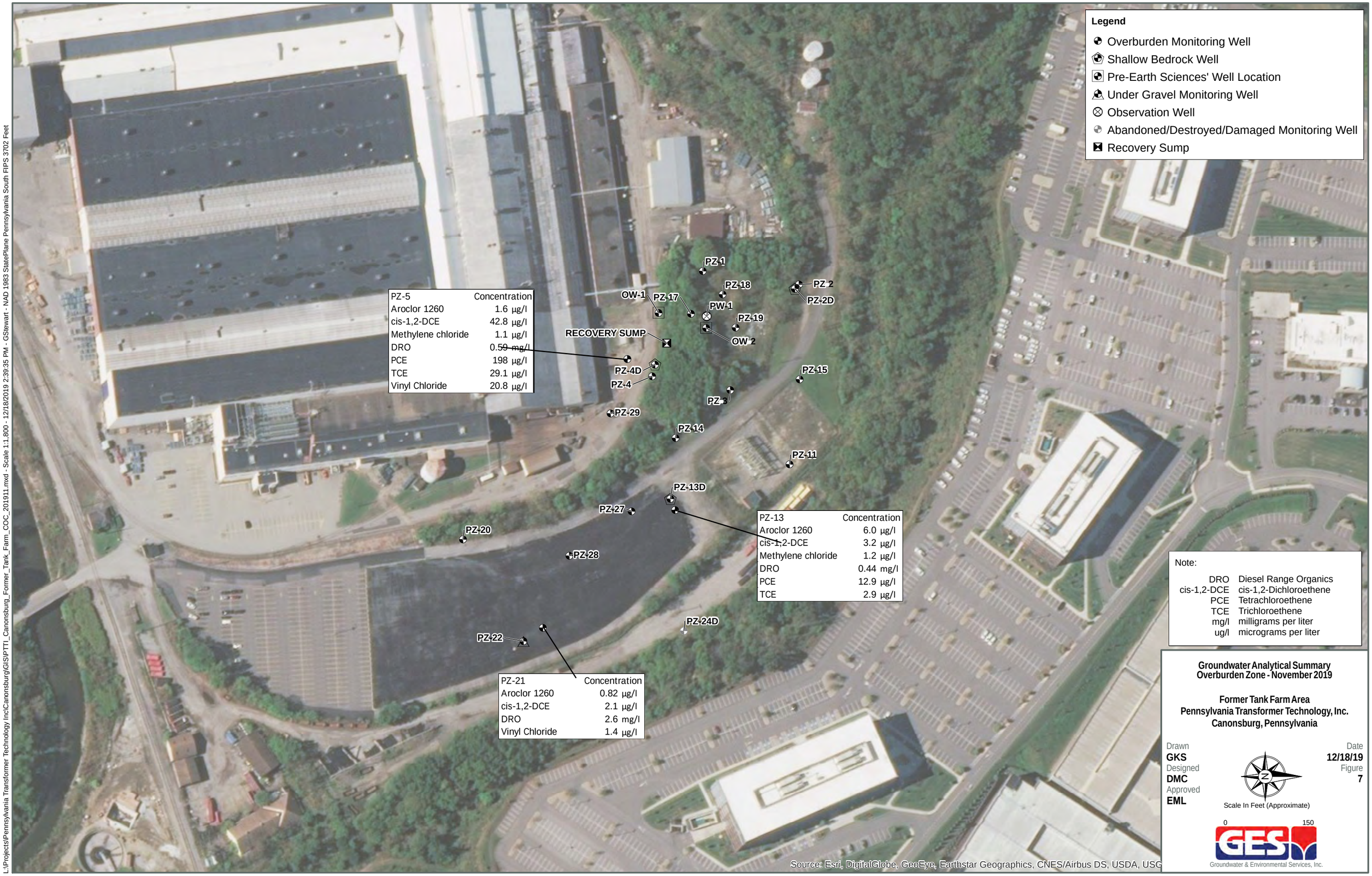
Additional Locations
LNAPL Thickness - November 11, 2019

Former Tank Farm Area
Pennsylvania Transformer Technology, Inc.
Canonsburg, Pennsylvania

Drawn	Date
GKS	12/9/19
Designed	Fig.
DMC	6
Approved	
EML	

Scale In Feet (Approximate)
0 150

Groundwater & Environmental Services, Inc.



Note:

DRO	Diesel Range Organics
cis-1,2-DCE	cis-1,2-Dichloroethene
PCE	Tetrachloroethene
TCE	Trichloroethene
mg/l	milligrams per liter
ug/l	micrograms per liter

Groundwater Analytical Summary
Overburden Zone - November 2019

Former Tank Farm Area
Pennsylvania Transformer Technology, Inc.
Canonsburg, Pennsylvania

Drawn **GKS**
Designed **DMC**
Approved **EML**
Date **12/18/19**
Figure **7**

Scale In Feet (Approximate)
0 150

Groundwater & Environmental Services, Inc.

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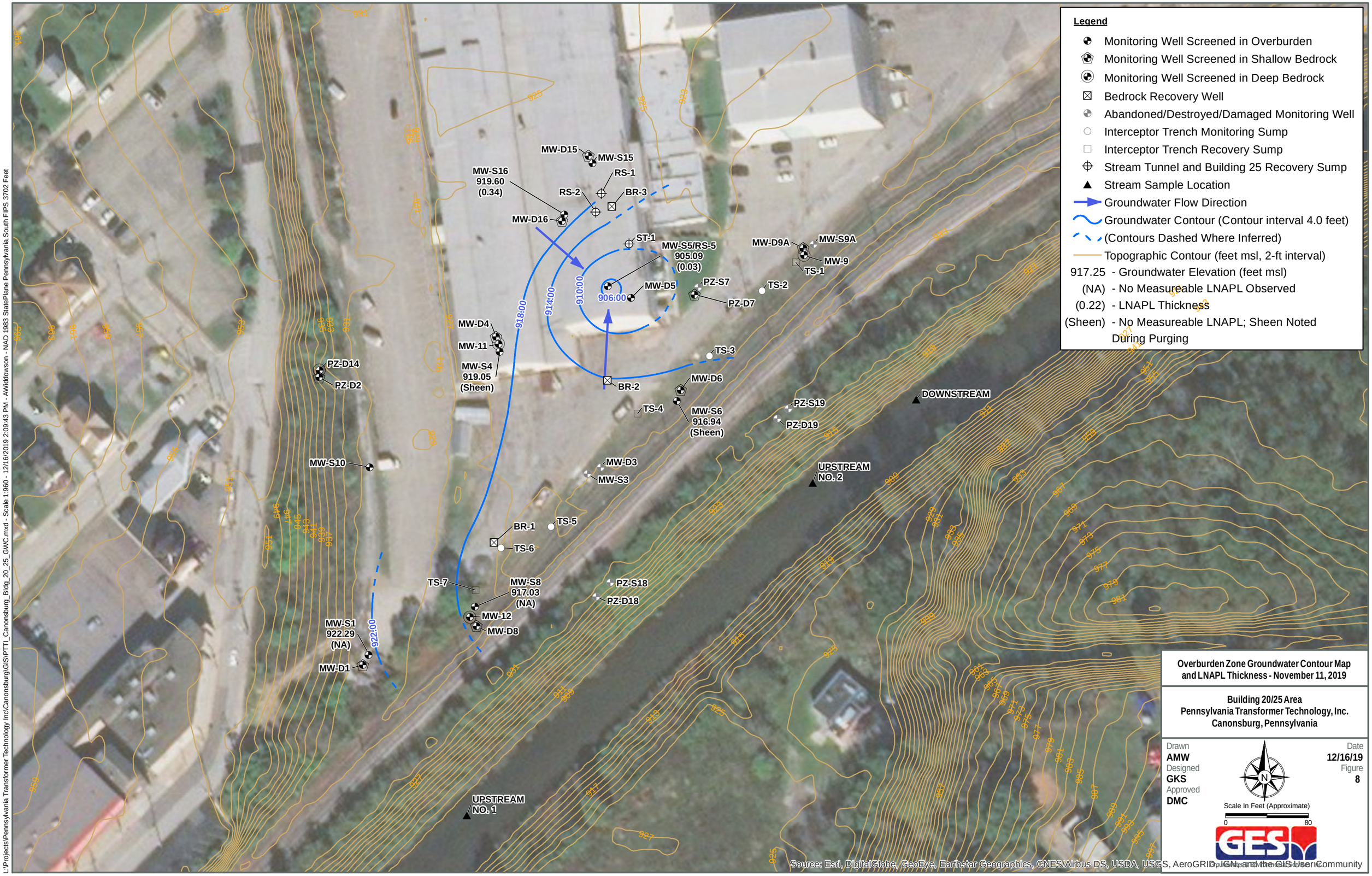

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MW-D15
MW-S15
RS-1
BR-3
MW-S16
MW-D16
RS-2
ST-1
MW-D9A
MW-S9A
MW-9
917.06
(NA)
TS-1
TS-2
MW-S5/RS-5
PZ-S7
PZ-D7
MW-D5
MW-11
917.42
(NA)
MW-D4
MW-S4
PZ-D14
917.24
(NA)
PZ-D2
TS-3
BR-2
MW-D6
MW-S6
TS-4
PZ-S19
PZ-D19
DOWNSTREAM
917.25
917.00
916.75
916.50
MW-S10
MW-D3
MW-S3
UPSTREAM
NO. 2
TS-5
BR-1
TS-6
PZ-S18
PZ-D18
TS-7
MW-12
916.35
(NA)
MW-S8
MW-D8
MW-S1
MW-D1
UPSTREAM
NO. 1

Legend

- Monitoring Well Screened in Overburden
- Monitoring Well Screened in Shallow Bedrock
- Monitoring Well Screened in Deep Bedrock
- Bedrock Recovery Well
- Abandoned/Destroyed/Damaged Monitoring Well
- Interceptor Trench Monitoring Sump
- Interceptor Trench Recovery Sump
- Stream Tunnel and Building 25 Recovery Sump
- Stream Sample Location
- Groundwater Flow Direction
- Groundwater Contour (Contour interval 0.25 feet)
- (Contours Dashed Where Inferred)
- Topographic Contour (feet msl, 2-ft interval)
- 917.25 - Groundwater Elevation (feet msl)
- (NA) - No Measureable LNAPL Observed
- (0.22) - LNAPL Thickness
- (Sheen) - No Measureable LNAPL; Sheen Noted During Purging

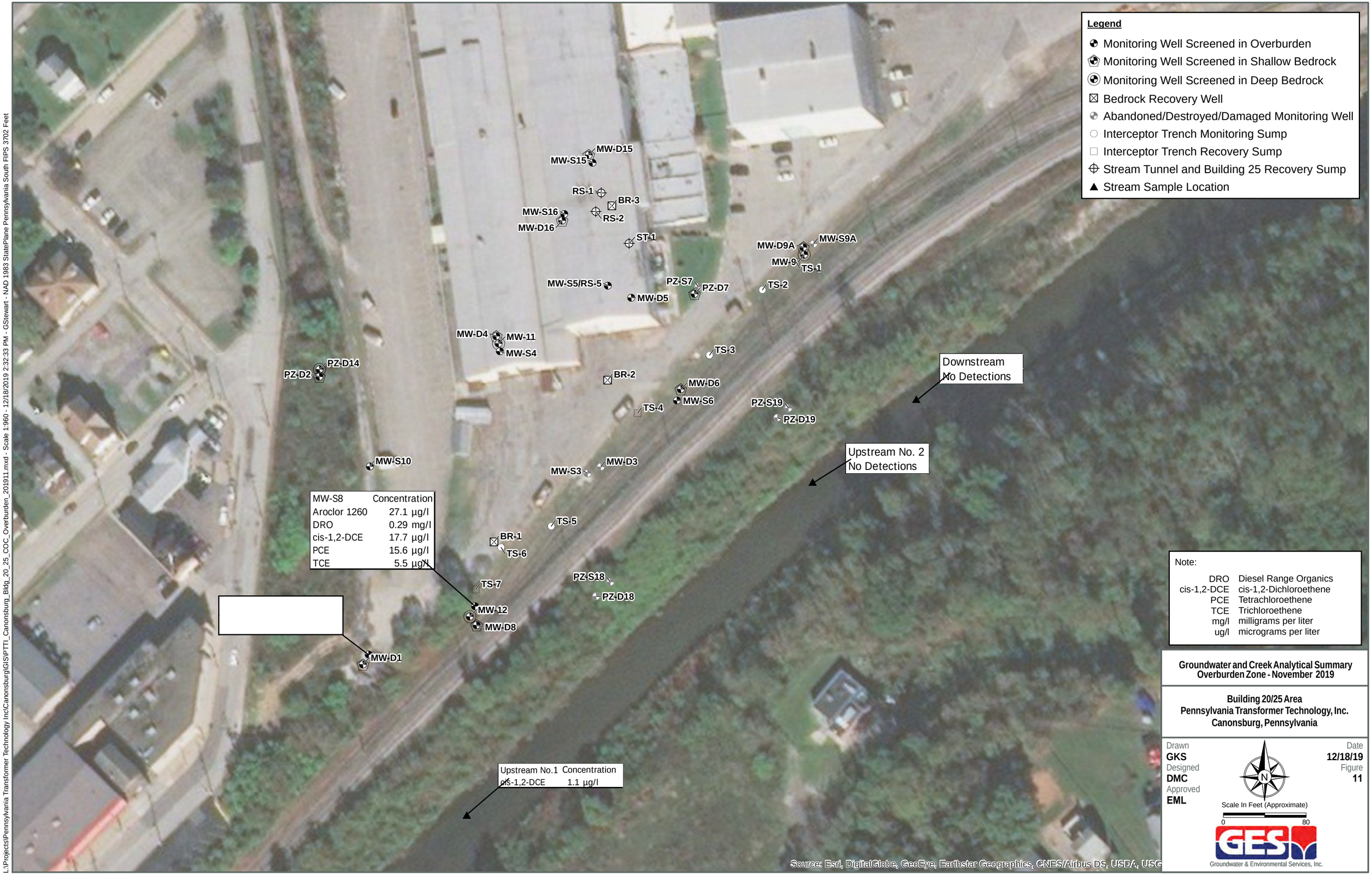
Deep Bedrock Zone Groundwater Contour Map and LNAPL Thickness - November 11, 2019

Building 20/25 Area
Pennsylvania Transformer Technology, Inc.
Canonsburg, Pennsylvania

Drawn: AMW
Designed: GKS
Approved: DMC
Date: 12/19/19
Figure: 10

Scale In Feet (Approximate)
0 80

Groundwater & Environmental Services, Inc.



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Note:

DRO	Diesel Range Organics
cis-1,2-DCE	cis-1,2-Dichloroethene
trans-1,2-DCE	trans-1,2-Dichloroethene
PCE	Tetrachloroethene
mg/l	milligrams per liter
ug/l	micrograms per liter

Groundwater Analytical Summary Shallow Bedrock Zone - November 2019

Building 20/25 Area
Pennsylvania Transformer Technology, Inc.
Canonsburg, Pennsylvania

Drawn **GKS**
Designed **DMC**
Approved **EML**
Date **12/18/19**
Figure **12**

Scale In Feet (Approximate)
0 80

Groundwater & Environmental Services, Inc.

L:\Projects\Pennsylvania Transformer Technology Inc\Canonsburg\GIS\PTTI_Canonsburg_Bldg_20_25_COC_Shallow_201911.mxd - Scale 1:960 - 12/18/2019 2:34:41 PM - GStewart - NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet

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Tables

Table 1

Former Tank Farm Area
Groundwater Monitoring Well Gauging & Sample Collection Summary - November 2019

	Well Identification	Top of Casing (TOC) Elevation (feet MSL)	Depth to Groundwater from TOC (feet)	Groundwater Elevation[1] (feet MSL)	Current Well Total Depth from TOC (feet)	November 2018 LNAPL Observation[2] (feet)	May 2019 LNAPL Observation (feet)	November 2019 LNAPL Observation (feet)	November 2019 Groundwater Sample Collected
Overburden Wells									
1-	PZ-1	957.92	32.06	925.86	45.85	0.02	Sheen	Sheen	No
2-	PZ-2	957.94	28.36	929.58	45.87	Sheen	Sheen	None	NS
3-	PZ-3	955.90	32.68	923.36	40.25	0.02	0.12	0.17	No
4-	PZ-4	926.58	10.49	916.09	16.40	0.02	Sheen	None	NS
5-	PZ-5	926.04	10.17	915.87	15.60	None	None	None	Yes
6-	PZ-11	954.48	28.31	926.17	38.30	0.01	Sheen	Sheen	No
7-	PZ-13	951.44	30.21	921.23	38.08	Sheen	None	None	Yes
8-	PZ-14	951.44	28.16	923.32	41.35	0.14	0.06	0.05	No
9-	PZ-15	957.58	29.56	928.02	46.65	0.01	Sheen	None	NS
10-	PZ-17	958.43	38.40	920.47	46.94	2.51	0.74	0.52	NS
11-	PZ-18	959.14	33.66	925.66	49.65	0.34	0.27	0.21	No
12-	PZ-19	959.32	34.41	924.91	48.75	Sheen	Sheen	Sheen	NS
13-	PZ-20	941.25	23.30	917.95	30.80	Sheen	Sheen	Sheen	No
14-	PZ-21	947.47	33.96	913.51	39.82	Sheen	None	None	Yes
15-	PZ-22[3]	948.06	30.87	917.19	37.40	Sheen	None	Sheen	NS
16-	PZ-23[4]	Well Lost							
17-	PZ-27	945.10	26.90	918.20	33.97	Sheen	Sheen	Sheen	No
Shallow Bedrock Wells									
18-	PZ-2D	957.92	39.49	918.43	68.31	0.01	None	Sheen	NS
19-	PZ-4D	928.72	13.22	915.50	38.53	None	None	None	NS
20-	PZ-13D	951.72	35.67	916.05	61.50	Sheen	None	Sheen	NS
21-	PZ-24D[4]	Well Lost							
Additional Locations									
22-	PW-1	958.17	35.28	922.89	44.40	None	None	None	NS
23-	OW-1	930.08	11.34	918.74	20.68	None	None	None	NS
24-	OW-2	959.14	32.74	926.51	39.15	0.22	0.15	0.13	NS
25-	Recovery Sump	928.63	11.35	917.28	15.90	None	None	None	NS

NS - Not scheduled for sampling/gauge only

[1] Elevations in monitoring wells with a measurable layer of LNAPL were adjusted using the specific gravity (g/mL) for diesel fuel to adjust for the weight of product on the water table. (Well Casing Elevation - Depth to Water + [0.85 x LNAPL Thickness]). The specific gravity for diesel fuel was obtained from documentation by the American Petroleum Institute.

[2] Data presented by Tetra Tech.

[3] Monitoring well PZ-22 communicates with the undergravel of the 6-foot storm sewer.

[4] Monitoring wells PZ-23 and PZ-24D have been "lost/damaged" and can longer be utilized for monitoring activities.

Table 2

Building 20/25 Area
Groundwater Monitoring Well Gauging & Sample Collection Summary - November 2019

	Well Identification	Top of Casing (TOC) Elevation (feet MSL)	Depth to Groundwater from TOC (feet)	Groundwater Elevation[1] (feet MSL)	Current Well Total Depth from TOC (feet)	November 2018 LNAPL Observation[2] (feet)	May 2019 LNAPL Observation (feet)	November 2019 LNAPL Observation (feet)	November 2019 Groundwater Sample Collected
Overburden Wells									
1-	MW-S1	929.90	7.61	922.29	12.13	None	None	None	Yes
2-	MW-S3[3]	926.53	Well Lost						
3-	MW-S4	926.20	7.15	919.05	15.62	Sheen	Sheen	Sheen	No
4-	MW-S5/RS-5	911.30	6.24	905.09	NM	0.01	NA	0.03	NS
5-	MW-S6	926.46	9.52	916.94	12.81	0.01	Sheen	Sheen	No
6-	PZ-S7[3]	924.34	Well Lost						
7-	MW-S8	928.06	11.03	917.03	15.65	None	None	None	Yes
8-	MW-S9A[3]	926.20	Well Lost						
9-	MW-S10[4]	930.36	NM	NM	NM	Dry	None	NA	NA
10-	MW-S15[4]	925.80	NM	NM	NM	0.01	NA	NA	NA
11-	MW-S16	926.10	6.79	919.60	12.93	0.12	0.28	0.34	No
12-	PZ-S18[3]	931.40	Well Lost						
13-	PZ-S19[3]	931.30	Well Lost						
Shallow Bedrock Wells									
14-	MW-D1	929.99	8.73	921.26	28.19	None	None	None	Yes
15-	PZ-D2	933.68	6.15	927.53	23.10	None	None	None	Yes
16-	MW-D3[3]	Well Lost							
17-	MW-D4	926.20	10.59	915.61	34.05	Sheen	None	None	Yes
18-	MW-D5[5]	Well Removed from Monitoring Program							
19-	MW-D6	926.07	10.80	915.27	31.56	0.01	Sheen	Sheen	No
20-	PZ-D7	924.46	11.52	912.94	30.86	None	None	None	Yes
21-	MW-D8	927.82	16.59	911.23	28.52	0.1[6]	0.15[6]	Sheen	No
22-	MW-D9A	925.70	10.02	915.68	24.55	Sheen	Sheen	Sheen	No
23-	MW-D15[4]	926.00	NM	NM	NM	Sheen	NA	NA	NA
24-	MW-D16	925.25	11.91	913.34	29.05	None	None	None	Yes
25-	PZ-D18[3]	931.20	Well Lost						
26-	PZ-D19[3]	931.10	Well Lost						
Deep Bedrock Wells									
27-	MW-9	926.20	9.14	917.06	86.42	None	None	None	Yes
28-	MW-11	926.40	8.98	917.42	77.50	Sheen	Sheen	None	Yes
29-	MW-12	930.40	14.05	916.35	88.64	None	None	None	Yes
30-	PZ-D14	933.80	16.56	917.24	86.15	None	None	None	Yes

NA - Not available/inaccessible
NM - Not measured
NS - Not scheduled for sampling/gauge only

[1] Elevations in monitoring wells with a measurable layer of LNAPL were adjusted using the specific gravity (g/mL) for diesel fuel to adjust for the weight of product on the water table. (Well Casing Elevation - Depth to Water + [0.85 x LNAPL Thickness]). The specific gravity for diesel fuel was obtained from documentation by the American Petroleum Institute.

[2] Data presented by Tetra Tech.

[3] These wells (MW-S3, MW-S9A, MW-D3, PZ-S7, PZ-S18, PZ-S19, PZ-D18 and PZ-D19) have been "lost/damaged" and can no longer be used for monitoring.

[4] Monitoring Well MW-S10, MW-S15 and MW-D15 could not be sampled due to ongoing construction activites at the facility.

[5] Monitoring well MW-D5 was previously dropped from the monitoring program because the well does not communicate with bedrock and because downgradient monitoring well MW-D6 adequately delineates the extent of shallow bedrock groundwater impacts.

[6] Indicates DNAPL was detected at MW-D8.

Table 3

Former Tank Farm Area
Groundwater Data Summary - Detections Only November 2019

Parameters	Units	PADEP NU/NR MSC(1)	Sample Identification and Date		
			OVERBURDEN AQUIFER		
			PZ-5	PZ-13	PZ-21
			11/13/2019	11/13/2019	11/13/2019
Polychlorinated Biphenyls					
Aroclor 1260	µg/l	1.7	1.6	**6.0**	0.82
Total Petroleum Hydrocarbons (TPH)					
Diesel Range Organics (DRO)	mg/l	NS	0.59	0.44	2.6
Volatile Organic Compounds					
cis-1,2-Dichloroethene	µg/l	700	42.8	3.2	2.1
Methylene Chloride	µg/l	500	1.1	1.2	--
Tetrachloroethene	µg/l	50	**198**	12.9	--
Trichloroethene	µg/l	50	29.1	2.9	--
Vinyl Chloride	µg/l	20	**20.8**	--	1.4

Notes:
-- - Constituent not detected
µg/l - micrograms per liter
mg/l - milligrams per liter
Bold - indicates exceedance of Act 2 MSC
NS - indicates there is no PADEP regulatory standard
(1) Pennsylvania Act 2 Non-Use Aquifer/Non-Residential Medium-Specific Concentration (MSC) as of August 27, 2016.

Table 4

Building 20/25 Area
Groundwater & Surface Water Data Summary - Detections Only November 2019

GROUNDWATER

Parameters	Units	PADEP NU/NR MSC(1)	Sample Identification and Date							
			OVERBURDEN AQUIFER		*SHALLOW BEDROCK AQUIFER*					*DEEP BEDROCK AQUIFER*
			MW-S1	MW-S8	MW-D1	PZ-D2	MW-D4	PZ-D7	MW-D16	MW-11
			11/12/2019	11/13/2019	11/12/2019	11/12/2019	11/13/2019	11/12/2019	11/13/2019	11/12/2019
Polychlorinated Biphenyls										
Aroclor 1260	µg/l	1.7	**2.8**	**27.1**	0.31	--	**20.1**	0.44	**444**	**3.1**
Organochlorine Pesticide										
Chlordane	µg/l	56	--	--	0.35	--	--	--	--	--
Total Petroleum Hydrocarbons (TPH)										
Diesel Range Organics (DRO)	mg/l	NS	0.13	0.29	0.12	--	1.7	0.18	2.1	0.11
Volatile Organics										
Benzene	µg/l	500	--	--	--	--	12.2	--	2.8	--
Chlorobenzene	µg/l	10,000	--	--	--	--	813	--	29.1	1.6
cis-1,2-Dichloroethene	µg/l	700	--	17.7	--	--	15.7	--	471	--
Methylene Chloride	µg/l	500	--	--	--	1.0	--	1.1	1.1	1.0
Tetrachloroethene	µg/l	50	--	15.6	4.8	4.9	--	--	--	--
trans-1,2-Dichloroethene	µg/l	1,000	--	--	--	--	--	--	8.0	--
Trichloroethene	µg/l	50	--	5.5	--	--	--	--	--	--
Vinyl Chloride	µg/l	20	--	--	--	--	2.8	--	**184**	--

SURFACE WATER

Parameters	Units	PADEP NU/NR MSC(1)	Upstream No. 1	Upstream No. 2	Downstream
			11/11/2019	11/11/2019	11/11/2019
Volatile Organics					
cis-1,2-Dichloroethene	µg/l	NA	1.1	--	--

Notes:
--. Constituent not detected
µg/l - micrograms per liter
mg/l - milligrams per liter
Bold - indicates exceedance of Act 2 MSC
NS - indicates there is no PADEP regulatory standard
(1) Pennsylvania Act 2 Non-Use Aquifer/Non-Residential Medium-Specific Concentration (MSC) as of August 27, 2016.

Appendix A – Former Tank Farm Area Sample Logs, November 2019

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-1

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40's
Personnel: JS / AS
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 45.85
Depth to LNAPL (ft): Sheen
Depth to Water (ft): 32.06
Depth to DNAPL (ft): -
Measuring Point: TOC
Height of Water Column (ft): NA
Volume of Water in Casing (gal): NA
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: NA
Purge Volume (gal.): NA

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: NA
After Purging: NA
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0930

Field Parameters	*Units*	*Value*
Date Measured	-	11-13-19
Time Measured	-	1235
Temperature	Celsius	12.38
pH	Std. Units	7.17
Specific Conductance	ms/cm^C	1313
Oxidation/Reduction Potential	mV	-63.6
Dissolved Oxygen	mg/L	2.65
Turbidity	NTU	NA

SAMPLING DATA

Sample ID: PZ-1
Sampling Time: NA
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel: NA
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl
Laboratory: PACE

Comments: NO Sample - Sheen, some Iron

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-2

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 40's Cloudy
Personnel: JS/AS
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 45.87
Depth to LNAPL (ft): –
Depth to Water (ft): 28.36
Depth to DNAPL (ft): –
Measuring Point: TOC
Height of Water Column (ft): 17.51
Volume of Water in Casing (gal): 2.80
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: *NA*
Purge Start/Stop: *NA*
Purge Volume (gal.): *NA*

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: *NA*
After Purging: *NA*
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0930

Field Parameters	*Units*	*Value*
Date Measured		11-13-19
Time Measured		1305
Temperature	Celsius	12.48
pH	Std. Units	7.47
Specific Conductance	~~mS~~ uS/cm[C]	1001
Oxidation/Reduction Potential	mV	-70.6
Dissolved Oxygen	mg/L	2.27
Turbidity	NTU	

SAMPLING DATA

Sample ID: *NA*
Sampling Time: *NA*
Analyses (circle):

VOCs (8260) TPH (GRO/DRO) (8015)

PCBs (8082) Chlordane (8081)

Sampling Date: *NA*
Sampling Device: *NA*
Sampling Personnel: *NA*
Containers (No./Type/Size): *NA*
Laboratory: *NA*

Comments: Gauge only

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-3

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy
Personnel: JS / AS
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 40.25
Depth to LNAPL (ft): 32.51
Depth to Water (ft): 32.68
Depth to DNAPL (ft): -
Measuring Point: TOC
Height of Water Column (ft): 7.75
Volume of Water in Casing (gal): 1.21
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: NA
Purge Volume (gal.): NA

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: NA
After Purging: NA
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): NA

Field Parameters	*Units*	*Value*
Date Measured		NA
Time Measured		
Temperature	Celsius	
pH	Std. Units	
Specific Conductance	ms/cm^C	
Oxidation/Reduction Potential	mV	
Dissolved Oxygen	mg/L	
Turbidity	NTU	

SAMPLING DATA

Sample ID: PZ-3
Sampling Time: NA
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel:
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl
Laboratory: PACE

Comments: NO Sample - product/sheen

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-4

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 40's C cloudy
Personnel: JS/AS
Project #: 0705598

Well Diameter (in.):	2"
Well Construction:	PVC
Depth to Bottom (ft):	16.40
Depth to LNAPL (ft):	—
Depth to Water (ft):	10.49
Depth to DNAPL (ft):	—
Measuring Point:	TOC
Height of Water Column (ft):	5.91
Volume of Water in Casing (gal):	0.95

(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: *NA*
Purge Start/Stop: *NA*
Purge Volume (gal.): *NA*

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: *NA*
After Purging: *NA*

****Include note even if well not purged (i.e, bulk product)***

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time):

Field Parameters	*Units*	*Value*
Date Measured	-	11/13/19
Time Measured	-	0935
Temperature	Celsius	14.45
pH	Std. Units	7.27
Specific Conductance	ms/cm^C	1869
Oxidation/Reduction Potential	mV	-102.9
Dissolved Oxygen	mg/L	2.00
Turbidity	NTU	

SAMPLING DATA

Sample ID: *NA*
Sampling Time: *NA*
Analyses (circle):

VOCs (8260) TPH (GRO/DRO) (8015)

PCBs (8082) Chlordane (8081)

Sampling Date: *NA*
Sampling Device: *NA*
Sampling Personnel: *NA*
Containers (No./Type/Size): *NA*
Laboratory: *NA*

Comments: Gauge only

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-5

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40's
Personnel: JS / AS
Project #: 0705598

Well Diameter (in.):	2"
Well Construction:	PVC
Depth to Bottom (ft):	15.60
Depth to LNAPL (ft):	-
Depth to Water (ft):	10.17
Depth to DNAPL (ft):	-
Measuring Point:	TOC
Height of Water Column (ft):	5.43
Volume of Water in Casing (gal):	0.87

(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: 0900 / 0905
Purge Volume (gal.): ~3

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: clear, no odor
After Purging: cloudy, no odor

Include note even if well not purged (i.e, bulk product)

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0830

Field Parameters	*Units*	*Value*
Date Measured	-	11-13-19
Time Measured	-	0905
Temperature	Celsius	15.98
pH	Std. Units	7.22
Specific Conductance	ms/cm^C	1029
Oxidation/Reduction Potential	mV	-83.4
Dissolved Oxygen	mg/L	2.40
Turbidity	NTU	

SAMPLING DATA

Sample ID: PZ-5
Sampling Time: 0910
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: 11-13-19
Sampling Device: Bailer
Sampling Personnel: AS
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl
Laboratory: PACE

Comments: Duplicate #1 collected at 0915

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-11

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40's
Personnel: JS / AS
Project #: 0705598

Well Diameter (in.): 2
Well Construction: PVC
Depth to Bottom (ft): 38.30
Depth to LNAPL (ft): —
Depth to Water (ft): 28.31
Depth to DNAPL (ft): —
Measuring Point: TOC
Height of Water Column (ft): 9.99
Volume of Water in Casing (gal): 1.60
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: 1220 / 1225
Purge Volume (gal.): NA

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: Clear with Sheen and Iron
After Purging: Red and Cloudy with Sheen
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0830

Field Parameters	*Units*	*Value*
Date Measured	-	11-13-19
Time Measured	-	1225
Temperature	Celsius	11.66
pH	Std. Units	7.08
Specific Conductance	ms/cm[C]	1884
Oxidation/Reduction Potential	mV	33.5
Dissolved Oxygen	mg/L	2.24
Turbidity	NTU	NA

SAMPLING DATA

Sample ID: PZ-11
Sampling Time: NA
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel: NA
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl

Laboratory: PACE

Comments: Sheen No Sample

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-13

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40's
Personnel: JS / AS
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 38.08
Depth to LNAPL (ft): -
Depth to Water (ft): 30.21
Depth to DNAPL (ft): -
Measuring Point: TOC
Height of Water Column (ft): 7.87
Volume of Water in Casing (gal): 1.26
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: 1315 / 1325
Purge Volume (gal.): ~4

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging:
After Purging:
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-13-19 / 0930

Field Parameters	*Units*	*Value*
Date Measured	-	11-13-19
Time Measured	-	1525
Temperature	Celsius	12.53
pH	Std. Units	7.15
Specific Conductance	~~us~~ ms/cm^C	112
Oxidation/Reduction Potential	mV	-51.4
Dissolved Oxygen	mg/L	6.93
Turbidity	NTU	

SAMPLING DATA

Sample ID: PZ-13
Sampling Time: 1330
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: 11-13-19
Sampling Device: Bailer
Sampling Personnel: AS
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl

Laboratory: PACE

Comments:

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-14

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40's
Personnel: JS/AS
Project #: 705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 41.35
Depth to LNAPL (ft): 28.11
Depth to Water (ft): 28.16
Depth to DNAPL (ft):
Measuring Point: TOC
Height of Water Column (ft): 13.19
Volume of Water in Casing (gal): 2.11
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: NA
Purge Volume (gal.): NA

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: NA
After Purging: NA
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): NA

Field Parameters	*Units*	*Value*
Date Measured	-	NA
Time Measured	-	
Temperature	Celsius	
pH	Std. Units	
Specific Conductance	ms/cm^C	
Oxidation/Reduction Potential	mV	
Dissolved Oxygen	mg/L	
Turbidity	NTU	

SAMPLING DATA

Sample ID: PZ-14
Sampling Time: NA
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel:
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl
Laboratory: PACE

Comments: NO Sample, Product/Sheen

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-15

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40's
Personnel: JS / AS
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 46.65
Depth to LNAPL (ft): —
Depth to Water (ft): 29.56
Depth to DNAPL (ft): —
Measuring Point: TOC
Height of Water Column (ft): 17.09
Volume of Water in Casing (gal): 2.73
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: *NA*
Purge Start/Stop: *NA*
Purge Volume (gal.): *NA*

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: *NA*
After Purging: *NA*

**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 1-13-19/0930

Field Parameters	*Units*	*Value*
Date Measured	-	11-13-19
Time Measured	-	1310
Temperature	Celsius	11.75
pH	Std. Units	7.24
Specific Conductance	~~ms~~/cm[C]	1574
Oxidation/Reduction Potential	mV	-40.7
Dissolved Oxygen	mg/L	1.73
Turbidity	NTU	

SAMPLING DATA

Sample ID: *NA*
Sampling Time: *NA*
Analyses (circle):

VOCs (8260) TPH (GRO/DRO) (8015)

PCBs (8082) Chlordane (8081)

Sampling Date: *NA*
Sampling Device: *NA*
Sampling Personnel: *NA*
Containers (No./Type/Size): *NA*
Laboratory: *NA*

Comments: Gauge only

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-17

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40's
Personnel: JS / AS
Project #: 0705598

Well Diameter (in.):	2"
Well Construction:	PVC
Depth to Bottom (ft):	46.94
Depth to LNAPL (ft):	37.88
Depth to Water (ft):	38.40
Depth to DNAPL (ft):	-
Measuring Point:	TOC
Height of Water Column (ft):	8.54
Volume of Water in Casing (gal):	1.37

(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: *NA*
Purge Start/Stop: *NA*
Purge Volume (gal.): *NA*

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: *NA*
After Purging: *NA*

****Include note even if well not purged (i.e, bulk product)***

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time):

Field Parameters	*Units*	*Value*
Date Measured	-	NA
Time Measured	-	
Temperature	Celsius	
pH	Std. Units	
Specific Conductance	ms/cm^C	
Oxidation/Reduction Potential	mV	
Dissolved Oxygen	mg/L	
Turbidity	NTU	

SAMPLING DATA

Sample ID: *NA*
Sampling Time: *NA*
Analyses (circle):

VOCs (8260) TPH (GRO/DRO) (8015)

PCBs (8082) Chlordane (8081)

Sampling Date: *NA*
Sampling Device: *NA*
Sampling Personnel: *NA*
Containers (No./Type/Size): *NA*
Laboratory: *NA*

Comments: Gauge only

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-18

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40°S
Personnel: JS / AS
Project #: 0705598

Well Diameter (in.):	2"
Well Construction:	PVC
Depth to Bottom (ft):	49.65
Depth to LNAPL (ft):	33.45
Depth to Water (ft):	33.66
Depth to DNAPL (ft):	-
Measuring Point:	TOC
Height of Water Column (ft):	15.99
Volume of Water in Casing (gal):	2.56

(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: NA
Purge Volume (gal.): NA

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: NA
After Purging: NA

**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): NA

Field Parameters	*Units*	*Value*
Date Measured	-	NA
Time Measured	-	
Temperature	Celsius	
pH	Std. Units	
Specific Conductance	ms/cm^C	
Oxidation/Reduction Potential	mV	
Dissolved Oxygen	mg/L	
Turbidity	NTU	

SAMPLING DATA

Sample ID: PZ-18
Sampling Time: NA
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015)) (PCBs (8082)) (Chlordane (8081))

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel: NA
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl

Laboratory: PACE

Comments: NO Sample - Product / Sheen

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-19

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40's
Personnel: JS/AS
Project #: 0705598

Well Diameter (in.):	2
Well Construction:	PVC
Depth to Bottom (ft):	48.75
Depth to LNAPL (ft):	Sheen
Depth to Water (ft):	34.41
Depth to DNAPL (ft):	—
Measuring Point:	TOC
Height of Water Column (ft):	14.34
Volume of Water in Casing (gal):	2.29

(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: *NA*
Purge Start/Stop: *NA*
Purge Volume (gal.): *NA*

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: *NA*

After Purging: *NA*

**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0830

Field Parameters	*Units*	*Value*
Date Measured	-	11-13-19
Time Measured	-	1245
Temperature	Celsius	12.48
pH	Std. Units	7.21
Specific Conductance	ms/cm[C]	1382
Oxidation/Reduction Potential	mV	-71.4
Dissolved Oxygen	mg/L	2.61
Turbidity	NTU	

SAMPLING DATA

Sample ID: *NA*
Sampling Time: *NA*
Analyses (circle):

VOCs (8260) TPH (GRO/DRO) (8015)

PCBs (8082) Chlordane (8081)

Sampling Date: *NA*
Sampling Device: *NA*
Sampling Personnel: *NA*
Containers (No./Type/Size): *NA*
Laboratory: *NA*

Comments: Gauge only

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-20

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40's
Personnel: JS/AS
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 30.80
Depth to LNAPL (ft): Sheen
Depth to Water (ft): 23.30
Depth to DNAPL (ft):
Measuring Point: TOC
Height of Water Column (ft): 7.50
Volume of Water in Casing (gal): 1.20
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: NA
Purge Volume (gal.): NA

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: NA
After Purging: NA
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19

Field Parameters	*Units*	*Value*
Date Measured	-	11-13-19
Time Measured	-	1400
Temperature	Celsius	13.45
pH	Std. Units	7.64
Specific Conductance	ms/cm[C]	846
Oxidation/Reduction Potential	mV	6.6
Dissolved Oxygen	mg/L	8.28
Turbidity	NTU	NA

SAMPLING DATA

Sample ID: PZ-20
Sampling Time: NA
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel: NA
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl
Laboratory: PACE

Comments: NO Sample - Sheen

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-21

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40's
Personnel: JS/AS
Project #: 0705598

Well Diameter (in.):	2"
Well Construction:	PVC
Depth to Bottom (ft):	39.82
Depth to LNAPL (ft):	-
Depth to Water (ft):	33.96
Depth to DNAPL (ft):	-
Measuring Point:	TOC
Height of Water Column (ft):	5.86
Volume of Water in Casing (gal):	0.94

(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: 1345 / 1350
Purge Volume (gal.): ~3

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: Gray and Cloudy
After Purging: Gray and Cloudy

**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19/0630

Field Parameters	*Units*	*Value*
Date Measured	-	11-13-19
Time Measured	-	1350
Temperature	Celsius	13.42
pH	Std. Units	7.24
Specific Conductance	ms/cm	1406
Oxidation/Reduction Potential	mV	-17.7
Dissolved Oxygen	mg/L	2.29
Turbidity	NTU	NA

SAMPLING DATA

Sample ID: PZ-21
Sampling Time: 1355
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: 11-13-19
Sampling Device: Bailer
Sampling Personnel: A. Sorman
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl
Laboratory: PACE

Comments:

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-22

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40's
Personnel: JS / AS
Project #: 0705598

Well Diameter (in.):	2"
Well Construction:	PVC
Depth to Bottom (ft):	37.40
Depth to LNAPL (ft):	—
Depth to Water (ft):	30.87
Depth to DNAPL (ft):	—
Measuring Point:	TOC
Height of Water Column (ft):	6.53
Volume of Water in Casing (gal):	1.04

(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: *NA*
Purge Start/Stop: *NA*
Purge Volume (gal.): *NA*

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: *NA*

After Purging: *NA*

****Include note even if well not purged (i.e, bulk product)***

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11/12/19 0330

Field Parameters	*Units*	*Value*
Date Measured	-	11/13/19
Time Measured	-	1350
Temperature	Celsius	12.97
pH	Std. Units	7.53
Specific Conductance	ms/cm[C]	.154
Oxidation/Reduction Potential	mV	11.3
Dissolved Oxygen	mg/L	6.02
Turbidity	NTU	

SAMPLING DATA

Sample ID: *NA*
Sampling Time: *NA*
Analyses (circle):

VOCs (8260) TPH (GRO/DRO) (8015)

PCBs (8082) Chlordane (8081)

Sampling Date: *NA*
Sampling Device: *NA*
Sampling Personnel: *NA*
Containers (No./Type/Size): *NA*
Laboratory: *NA*

Comments: Gauge only Sheen observed,

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-27

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40's
Personnel: JS / AS
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 33.97
Depth to LNAPL (ft): Sheen
Depth to Water (ft): 26.90
Depth to DNAPL (ft): -
Measuring Point: TOC
Height of Water Column (ft): 7.07
Volume of Water in Casing (gal): 1.13
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: NA
Purge Volume (gal.): NA

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: NA
After Purging: NA

**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0930

Field Parameters	*Units*	*Value*
Date Measured	-	11-13-19
Time Measured	-	1340
Temperature	Celsius	13.20
pH	Std. Units	7.15
Specific Conductance	ms/cm[c] (ms)	1768
Oxidation/Reduction Potential	mV	2.3
Dissolved Oxygen	mg/L	2.30
Turbidity	NTU	NA

SAMPLING DATA

Sample ID: PZ-27
Sampling Time: NA
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel: NA
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl

Laboratory: PACE

Comments: NO Sample - Sheen

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-2D

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 40's, Cloudy
Personnel: JS/AS
Project #: 0705598

Well Diameter (in.):	2"
Well Construction:	PVC
Depth to Bottom (ft):	68.31
Depth to LNAPL (ft):	-
Depth to Water (ft):	39.49
Depth to DNAPL (ft):	-
Measuring Point:	TOC
Height of Water Column (ft):	28.82
Volume of Water in Casing (gal):	4.61

(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: *NA*
Purge Start/Stop: *NA*
Purge Volume (gal.): *NA*

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: *NA*

After Purging: *NA*

Include note even if well not purged (i.e, bulk product)

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19/0830

Field Parameters	*Units*	*Value*
Date Measured	-	11-13-19
Time Measured	-	1300
Temperature	Celsius	11.37
pH	Std. Units	7.71
Specific Conductance	~~mS~~ uS ~~mS~~/cm^C	122
Oxidation/Reduction Potential	mV	-43.2
Dissolved Oxygen	mg/L	4.35
Turbidity	NTU	N/A

SAMPLING DATA

Sample ID:	*NA*	**Sampling Date:**	*NA*
Sampling Time:	*NA*	**Sampling Device:**	*NA*
Analyses (circle):		**Sampling Personnel:**	*NA*
		Containers (No./Type/Size):	*NA*

VOCs (8260) TPH (GRO/DRO) (8015)

PCBs (8082) Chlordane (8081)

Laboratory: *NA*

Comments: Gauge only, sheen

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-4D

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: cloudy 40's
Personnel: JS / AS
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 38.53
Depth to LNAPL (ft): -
Depth to Water (ft): 13.22
Depth to DNAPL (ft): -
Measuring Point: TOC
Height of Water Column (ft): 25.31
Volume of Water in Casing (gal): 4.05
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: *NA*
Purge Start/Stop: *NA*
Purge Volume (gal.): *NA*

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: *NA*
After Purging: *NA*

****Include note even if well not purged (i.e, bulk product)***

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time):

Field Parameters	*Units*	*Value*
Date Measured		11/13/19
Time Measured		0930
Temperature	Celsius	14.54
pH	Std. Units	5.62
Specific Conductance	ms/cm[c]	856
Oxidation/Reduction Potential	mV	-26.5
Dissolved Oxygen	mg/L	1.89
Turbidity	NTU	

SAMPLING DATA

Sample ID: *NA*
Sampling Time: *NA*
Analyses (circle):

VOCs (8260) TPH (GRO/DRO) (8015)

PCBs (8082) Chlordane (8081)

Sampling Date: *NA*
Sampling Device: *NA*
Sampling Personnel: *NA*
Containers (No./Type/Size): *NA*
Laboratory: *NA*

Comments: Gauge only

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-13D

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40's
Personnel: JS / AS
Project #: 0705598

Well Diameter (in.):	2"
Well Construction:	PVC
Depth to Bottom (ft):	61.50
Depth to LNAPL (ft):	-
Depth to Water (ft):	35.67
Depth to DNAPL (ft):	-
Measuring Point:	TOC
Height of Water Column (ft):	25.83
Volume of Water in Casing (gal):	4.13

(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: *NA*
Purge Start/Stop: *NA*
Purge Volume (gal.): *NA*

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: *NA*

After Purging: *NA*

Include note even if well not purged (i.e, bulk product)

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19/0830

Field Parameters	*Units*	*Value*
Date Measured	-	11-13-19
Time Measured	-	1315
Temperature	Celsius	11.92
pH	Std. Units	7.61
Specific Conductance	~~ms~~ mS/cm	403
Oxidation/Reduction Potential	mV	30.9
Dissolved Oxygen	mg/L	3.30
Turbidity	NTU	

SAMPLING DATA

Sample ID: *NA*
Sampling Time: *NA*
Analyses (circle):

VOCs (8260) TPH (GRO/DRO) (8015)

PCBs (8082) Chlordane (8081)

Sampling Date: *NA*
Sampling Device: *NA*
Sampling Personnel: *NA*
Containers (No./Type/Size): *NA*
Laboratory: *NA*

Comments: Gauge only, sheen observed

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PW-1

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40°F
Personnel: JS / AS
Project #: 0705598

Well Diameter (in.):	8
Well Construction:	PVC
Depth to Bottom (ft):	44.40
Depth to LNAPL (ft):	-
Depth to Water (ft):	35.28
Depth to DNAPL (ft):	-
Measuring Point:	TOC
Height of Water Column (ft):	9.12
Volume of Water in Casing (gal):	23.80

(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
2	0.16
4	0.65
6	1.47
(8)	2.61

Purge Method: *NA*
Purge Start/Stop: *NA*
Purge Volume (gal.): *NA*

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: *NA*

After Purging: *NA*

Include note even if well not purged (i.e, bulk product)

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0530

Field Parameters	*Units*	*Value*
Date Measured	-	11-13-19
Time Measured	-	1250
Temperature	Celsius	12.15
pH	Std. Units	7.01
Specific Conductance	µs mS/cm[C]	1418
Oxidation/Reduction Potential	mV	-63.3
Dissolved Oxygen	mg/L	6.35
Turbidity	NTU	NA

SAMPLING DATA

Sample ID: *NA*
Sampling Time: *NA*
Analyses (circle):

VOCs (8260) TPH (GRO/DRO) (8015)

PCBs (8082) Chlordane (8081)

Sampling Date: *NA*
Sampling Device: *NA*
Sampling Personnel: *NA*
Containers (No./Type/Size): *NA*
Laboratory: *NA*

Comments: Gauge only

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: OW-1

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40's
Personnel: JS/AS
Project #: 0705598

Well Diameter (in.):	8
Well Construction:	Steel
Depth to Bottom (ft):	20.68
Depth to LNAPL (ft):	—
Depth to Water (ft):	11.34
Depth to DNAPL (ft):	—
Measuring Point:	TOC
Height of Water Column (ft):	9.34
Volume of Water in Casing (gal):	24.38

(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
2	0.16
4	0.65
6	1.47
(8)	2.61

Purge Method: *NA*
Purge Start/Stop: *NA*
Purge Volume (gal.): *NA*

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: *NA*
After Purging: *NA*

Include note even if well not purged (i.e, bulk product)

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): _____

Field Parameters	*Units*	*Value*
Date Measured	-	11/13/19
Time Measured	-	0950
Temperature	Celsius	15.62
pH	Std. Units	7.35
Specific Conductance	ms/cm^C	613
Oxidation/Reduction Potential	mV	-31.4
Dissolved Oxygen	mg/L	2.76
Turbidity	NTU	

SAMPLING DATA

Sample ID: *NA*
Sampling Time: *NA*
Analyses (circle):

VOCs (8260) TPH (GRO/DRO) (8015)

PCBs (8082) Chlordane (8081)

Sampling Date: *NA*
Sampling Device: *NA*
Sampling Personnel: *NA*
Containers (No./Type/Size): *NA*
Laboratory: *NA*

Comments: Gauge only

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: OW-2

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy 40's
Personnel: JS / AS
Project #: 0705598

Well Diameter (in.):	8
Well Construction:	PVC
Depth to Bottom (ft):	39.15
Depth to LNAPL (ft):	32.61
Depth to Water (ft):	32.74
Depth to DNAPL (ft):	-
Measuring Point:	TOC
Height of Water Column (ft):	6.41
Volume of Water in Casing (gal):	16.73

(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
2	0.16
4	0.65
(6)	1.47
8	2.61

Purge Method: *NA*
Purge Start/Stop: *NA*
Purge Volume (gal.): *NA*

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: *NA*
After Purging: *NA*

Include note even if well not purged (i.e, bulk product)

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): NA

Field Parameters	*Units*	*Value*
Date Measured	-	N/A
Time Measured	-	
Temperature	Celsius	
pH	Std. Units	
Specific Conductance	ms/cm^C	
Oxidation/Reduction Potential	mV	
Dissolved Oxygen	mg/L	
Turbidity	NTU	

SAMPLING DATA

Sample ID: *NA*
Sampling Time: *NA*
Analyses (circle):

VOCs (8260) TPH (GRO/DRO) (8015)

PCBs (8082) Chlordane (8081)

Sampling Date: *NA*
Sampling Device: *NA*
Sampling Personnel: *NA*
Containers (No./Type/Size): *NA*
Laboratory: *NA*

Comments: Gauge only

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: Recovery Sump

Area of Concern: Former Tank Farm
Event (Semi-annual/Annual): Annual
Date: 11-13-19
Weather: Cloudy 40's
Personnel: JS / AS
Project #: 0705598

Well Diameter (in.):	24"
Well Construction:	Steel
Depth to Bottom (ft):	15.90
Depth to LNAPL (ft):	-
Depth to Water (ft):	11.35
Depth to DNAPL (ft):	-
Measuring Point:	TOC
Height of Water Column (ft):	4.55
Volume of Water in Casing (gal):	107.03

(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
2	0.16
4	0.65
6	1.47
8	2.61

Purge Method: *NA*
Purge Start/Stop: *NA*
Purge Volume (gal.): *NA*

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: *NA*
After Purging: *NA*

Include note even if well not purged (i.e, bulk product)

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time):

Field Parameters	*Units*	*Value*
Date Measured	-	11/13/19
Time Measured	-	0945
Temperature	Celsius	12.20
pH	Std. Units	7.55
Specific Conductance	~~ms~~ µs/cm	1346
Oxidation/Reduction Potential	mV	30.3
Dissolved Oxygen	mg/L	5.40
Turbidity	NTU	-

SAMPLING DATA

Sample ID: *NA*
Sampling Time: *NA*
Analyses (circle):

VOCs (8260) TPH (GRO/DRO) (8015)

PCBs (8082) Chlordane (8081)

Sampling Date: *NA*
Sampling Device: *NA*
Sampling Personnel: *NA*
Containers (No./Type/Size): *NA*
Laboratory: *NA*

Comments: Gauge only

Appendix B – Building 20/25 Area Sample Collection Logs, November 2019

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-S1

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and Cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 12.13
Depth to LNAPL (ft): NP
Depth to Water (ft): 7.61
Depth to DNAPL (ft): NP
Measuring Point: TOC
Height of Water Column (ft): 4.52
Volume of Water in Casing (gal): 0.72
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: 1415 / 1420
Purge Volume (gal.): ~2.50

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: Clear
After Purging: Cloudy
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0730

Field Parameters	*Units*	*Value*
Date Measured	-	11-12-19
Time Measured	-	1420
Temperature	Celsius	15.21
pH	Std. Units	5.21
Specific Conductance	ms/cm^c	.272
Oxidation/Reduction Potential	mV	-2.4
Dissolved Oxygen	mg/L	5.75
Turbidity	NTU	

SAMPLING DATA

Sample ID: MW-S1
Sampling Time: 1425
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: 11-12-19
Sampling Device: Bailer
Sampling Personnel: A. Seman
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl
Laboratory: PACE

Comments:

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-S4

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and Cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 15.62
Depth to LNAPL (ft): NP
Depth to Water (ft): 7.15
Depth to DNAPL (ft): NP
Measuring Point: TOC
Height of Water Column (ft): 8.47
Volume of Water in Casing (gal): 1.36
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: 1005/1035
Purge Volume (gal.):

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: Cloudy, Sheen
After Purging: Cloudy, Sheen
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0930

Field Parameters	*Units*	*Value*
Date Measured	-	11-13-19
Time Measured	-	1005
Temperature	Celsius	17.69
pH	Std. Units	7.32
Specific Conductance	ms/cm[C]	1531
Oxidation/Reduction Potential	mV	-119.9
Dissolved Oxygen	mg/L	1.80
Turbidity	NTU	-

SAMPLING DATA

Sample ID: MW-S4
Sampling Time: NA
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel: NA
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl

Laboratory: PACE

Comments: Sheen No Sample

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-S5/RS-5

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-13
Weather: 45 and Cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): 6"
Well Construction: PVC
Depth to Bottom (ft): NM
Depth to LNAPL (ft): ~~Hard NP~~ 6.21
Depth to Water (ft): 6.24
Depth to DNAPL (ft): NP
Measuring Point: TOC
Height of Water Column (ft): NA
Volume of Water in Casing (gal): NA
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
(6)	1.47
8	2.61

Purge Method: NA
Purge Start/Stop: NA
Purge Volume (gal.): NA

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: NA
After Purging: NA
Include note even if well not purged (i.e, bulk product)

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): NA

Field Parameters	*Units*	*Value*
Date Measured		NA
Time Measured		
Temperature	Celsius	
pH	Std. Units	
Specific Conductance	ms/cm^c	
Oxidation/Reduction Potential	mV	
Dissolved Oxygen	mg/L	
Turbidity	NTU	

SAMPLING DATA

Sample ID: NA
Sampling Time: NA
Analyses (circle):

VOCs (8260) TPH (GRO/DRO) (8015)

PCBs (8082) Chlordane (8081)

Sampling Date: NA
Sampling Device: NA
Sampling Personnel: NA
Containers (No./Type/Size): NA
Laboratory: NA

Comments: GAUGE ONLY

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-S6

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and Cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 12.81
Depth to LNAPL (ft): NP
Depth to Water (ft): 9.52
Depth to DNAPL (ft): NP
Measuring Point: TOC
Height of Water Column (ft): 3.29
Volume of Water in Casing (gal): 0.53
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop:
Purge Volume (gal.):

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: Bright Red Iron, Sheen
After Purging: Bright Red Iron, Sheen
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0930

Field Parameters	*Units*	*Value*
Date Measured	-	11/13/19
Time Measured	-	1145
Temperature	Celsius	16.35
pH	Std. Units	7.17
Specific Conductance	~~us~~ ms/cm	750
Oxidation/Reduction Potential	mV	-7.6
Dissolved Oxygen	mg/L	1.52
Turbidity	NTU	

SAMPLING DATA

Sample ID: MW-S6
Sampling Time: NA
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel: NA
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl
Laboratory: PACE

Comments:

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-S8

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 15.65
Depth to LNAPL (ft): NP
Depth to Water (ft): 11.03
Depth to DNAPL (ft): NP
Measuring Point: TOC
Height of Water Column (ft): 4.62
Volume of Water in Casing (gal): 0.74
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: 1105 / 1110
Purge Volume (gal.): 2.5

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: Slightly cloudy
After Purging: Slightly cloudy
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0830

Field Parameters	*Units*	*Value*
Date Measured		11-13-19
Time Measured		1110
Temperature	Celsius	14.92
pH	Std. Units	7.01
Specific Conductance	~~mg~~ mS/cm	1136
Oxidation/Reduction Potential	mV	9.5
Dissolved Oxygen	mg/L	2.66
Turbidity	NTU	

SAMPLING DATA

Sample ID: MW-S8
Sampling Time: 1115
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: ~~AS~~ 11-13-19
Sampling Device: Bailer
Sampling Personnel: A. Seman
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl

Laboratory: PACE

Comments:

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.:
MW-S10

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and Cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): NA
Well Construction:
Depth to Bottom (ft):
Depth to LNAPL (ft):
Depth to Water (ft):
Depth to DNAPL (ft):
Measuring Point:
Height of Water Column (ft):
Volume of Water in Casing (gal):
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: NA
Purge Volume (gal.): NA

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: NA
After Purging: NA
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): NA

Field Parameters	*Units*	*Value*
Date Measured		NA
Time Measured	-	
Temperature	Celsius	
pH	Std. Units	
Specific Conductance	ms/cm^C	
Oxidation/Reduction Potential	mV	
Dissolved Oxygen	mg/L	
Turbidity	NTU	

SAMPLING DATA

Sample ID: MW-S10
Sampling Time: NA
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel: NA
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl

Laboratory: PACE

Comments: Frac Tank was placed on Top of well

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-S15

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-13
Weather: 45 and Cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): NA
Well Construction:
Depth to Bottom (ft):
Depth to LNAPL (ft):
Depth to Water (ft):
Depth to DNAPL (ft):
Measuring Point:
Height of Water Column (ft):
Volume of Water in Casing (gal):
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: NA
Purge Volume (gal.): NA

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: NA
After Purging: NA
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): NA

Field Parameters	*Units*	*Value*
Date Measured		NA
Time Measured		
Temperature	Celsius	
pH	Std. Units	
Specific Conductance	ms/cm^c	
Oxidation/Reduction Potential	mV	
Dissolved Oxygen	mg/L	
Turbidity	NTU	

SAMPLING DATA

Sample ID: MW-S15
Sampling Time: NA
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel: NA
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl

Laboratory: PACE

Comments: *Could Not be located due to construction activities. Possibly destroyed

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-S16

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and Cloudy
Personnel: A. Seaman
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 12.93
Depth to LNAPL (ft): 6.45
Depth to Water (ft): 6.79
Depth to DNAPL (ft): ~~12.95~~ NA
Measuring Point: TOC
Height of Water Column (ft): 6.48
Volume of Water in Casing (gal): 1.04
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: NA
Purge Volume (gal.): NA

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: NA
After Purging: NA
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): NA

Field Parameters	*Units*	*Value*
Date Measured	-	NA
Time Measured	-	↓
Temperature	Celsius	
pH	Std. Units	
Specific Conductance	ms/cm^C	
Oxidation/Reduction Potential	mV	
Dissolved Oxygen	mg/L	
Turbidity	NTU	

SAMPLING DATA

Sample ID: MW-S16
Sampling Time: NA
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel: NA
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl

Laboratory: PACE

Comments: NO Sample or Field parameters due to LNAPL

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-D1

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and Cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 28.19
Depth to LNAPL (ft): NP
Depth to Water (ft): 8.73
Depth to DNAPL (ft): NP
Measuring Point: TOC
Height of Water Column (ft): 19.46
Volume of Water in Casing (gal): 3.11
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: 1430 / 1440
Purge Volume (gal.): ~10.0

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: Clear
After Purging: Clear
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0830

Field Parameters	*Units*	*Value*
Date Measured	-	11-12-19
Time Measured	-	1435
Temperature	Celsius	15.37
pH	Std. Units	10.56
Specific Conductance	~~µS~~ mS/cm	890
Oxidation/Reduction Potential	mV	-2.8
Dissolved Oxygen	mg/L	6.07
Turbidity	NTU	

SAMPLING DATA

Sample ID: MW-D1
Sampling Time: 1445
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: 11-12-19
Sampling Device: Bailer
Sampling Personnel: A. Seman
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl

Laboratory: PACE

Comments: Field Blank # 2 collected at 1455

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-D2

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and Cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): WL 3D ~~36.15~~ 23.10 Ft
Depth to LNAPL (ft): NP
Depth to Water (ft): WL 3D ~~16.56~~ 6.15 Ft
Depth to DNAPL (ft): NP
Measuring Point: TOC
Height of Water Column (ft): 16.95
Volume of Water in Casing (gal): 2.71
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: 1015 / 1029
Purge Volume (gal.): ~8.50

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: Cloudy No sheen
After Purging: Cloudy No sheen
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0830

Field Parameters	*Units*	*Value*
Date Measured		
Time Measured		1020
Temperature	Celsius	14.07
pH	Std. Units	7.25
Specific Conductance	MS mS/cm	~~10.20~~ 1030
Oxidation/Reduction Potential	mV	125.17
Dissolved Oxygen	mg/L	5.25
Turbidity	NTU	NA

SAMPLING DATA

Sample ID: PZ-D2
Sampling Time: 1405
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: 11-12-19
Sampling Device: Bailer
Sampling Personnel: A. Seman
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl

Laboratory: PACE

Comments:

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-D4

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and Cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 34.05
Depth to LNAPL (ft): NP
Depth to Water (ft): 10.59
Depth to DNAPL (ft): NP
Measuring Point: TOC
Height of Water Column (ft): 23.46
Volume of Water in Casing (gal): 3.75
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: 1010 / 1015
Purge Volume (gal.): ~11.5

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: Clear, Sulfur odor
After Purging: Clear, Odor
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0830

Field Parameters	*Units*	*Value*
Date Measured	-	11/13/19
Time Measured	-	1010
Temperature	Celsius	17.94
pH	Std. Units	7.44
Specific Conductance	~~µS~~ mS/cm	1314
Oxidation/Reduction Potential	mV	-69.5
Dissolved Oxygen	mg/L	3.24
Turbidity	NTU	

SAMPLING DATA

Sample ID: MW-D4
Sampling Time: 1020
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: 11-13-19
Sampling Device: Bailer
Sampling Personnel: A. Seman
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl

Laboratory: PACE

Comments:

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-D6

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and cloudy
Personnel: A. Soman
Project #: 0705598

Well Diameter (in.):	2"
Well Construction:	PVC
Depth to Bottom (ft):	31.56
Depth to LNAPL (ft):	NP
Depth to Water (ft):	10.80
Depth to DNAPL (ft):	NP
Measuring Point:	TOC
Height of Water Column (ft):	20.76
Volume of Water in Casing (gal):	3.32

(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: NA
Purge Volume (gal.): NA

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: Sheen
After Purging: Sheen

**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 10:30

Field Parameters	*Units*	*Value*
Date Measured	-	11/13/19
Time Measured	-	1140
Temperature	Celsius	16.09
pH	Std. Units	7.41
Specific Conductance	ms/cm^C	220
Oxidation/Reduction Potential	mV	20.5
Dissolved Oxygen	mg/L	4.70
Turbidity	NTU	

SAMPLING DATA

Sample ID: MW-D6
Sampling Time: NA
Analyses (circle):

VOCs (8260) TPH (GRO/DRO) (8015)
PCBs (8082) Chlordane (8081)

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel: NA
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl
Laboratory: PACE

Comments:

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-D7

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: ~~Arjeeman~~ AS 45 and Cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): 1.25"
Well Construction: PVC
Depth to Bottom (ft): 30.86
Depth to LNAPL (ft): NP
Depth to Water (ft): 11.52
Depth to DNAPL (ft): NP
Measuring Point: TOC
Height of Water Column (ft): 19.34
Volume of Water in Casing (gal): 0.77
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
2	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Peristaltic Pump
Purge Start/Stop: 1230/1240
Purge Volume (gal.): ~2.50

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: Slightly cloudy
After Purging: Slightly cloudy
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0830

Field Parameters	*Units*	*Value*
Date Measured	-	11-12-19
Time Measured	-	1235
Temperature	Celsius	13.79
pH	Std. Units	7.96
Specific Conductance	~~µS/cm~~ ms/cm^C	1654
Oxidation/Reduction Potential	mV	-125.10
Dissolved Oxygen	mg/L	4.25
Turbidity	NTU	

SAMPLING DATA

Sample ID: PZ-D7
Sampling Time: 1245
Analyses (circle):

VOCs (8260) TPH (GRO/DRO) (8015)
PCBs (8082) Chlordane (8081)

Sampling Date: 11-12-19
Sampling Device: Peristaltic Pump
Sampling Personnel: A. Seman
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl
Laboratory: PACE

Comments:

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.:
MW-D8

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-13
Weather: 45 and Cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 28.52
Depth to LNAPL (ft): NP
Depth to Water (ft): 16.59
Depth to DNAPL (ft): NP
Measuring Point: TOC
Height of Water Column (ft): 11.93
Volume of Water in Casing (gal): 1.91
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: 1120
Purge Volume (gal.): ~5.0

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: Sheen, clear
After Purging: Sheen, clear
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-13 / 0930

Field Parameters	*Units*	*Value*
Date Measured		11-13-13
Time Measured		1120
Temperature	Celsius	14.66
pH	Std. Units	7.12
Specific Conductance	ms/cm^C	1485
Oxidation/Reduction Potential	mV	-12.4
Dissolved Oxygen	mg/L	2.04
Turbidity	NTU	NA

SAMPLING DATA

Sample ID: MW-D8
Sampling Time: NA
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel: NA
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl
Laboratory: PACE

Comments: Sheen No Sample

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-D9A

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and Cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 24.55
Depth to LNAPL (ft): NP
Depth to Water (ft): 10.02
Depth to DNAPL (ft): NP
Measuring Point: TOC
Height of Water Column (ft): 14.53
Volume of Water in Casing (gal): 2.32
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: 1350 / 1352
Purge Volume (gal.): 1.0

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: Clear, sheen
After Purging: Clear, sheen
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0830

Field Parameters	*Units*	*Value*
Date Measured		11-12-19
Time Measured		1355
Temperature	Celsius	14.96
pH	Std. Units	7.43
Specific Conductance	ms/cm^C	2331
Oxidation/Reduction Potential	mV	82.5
Dissolved Oxygen	mg/L	21.6
Turbidity	NTU	

SAMPLING DATA

Sample ID: MW-D9A
Sampling Time: NA
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel: NA
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl

Laboratory: PACE

Comments: No Plug on well. Sheen No Sample

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-D15

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and Cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): NA
Well Construction:
Depth to Bottom (ft):
Depth to LNAPL (ft):
Depth to Water (ft):
Depth to DNAPL (ft):
Measuring Point:
Height of Water Column (ft):
Volume of Water in Casing (gal):
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: NA
Purge Volume (gal.): NA

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: NA
After Purging: NA
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): NA

Field Parameters	*Units*	*Value*
Date Measured		NA
Time Measured		
Temperature	Celsius	
pH	Std. Units	
Specific Conductance	ms/cm^C	
Oxidation/Reduction Potential	mV	
Dissolved Oxygen	mg/L	
Turbidity	NTU	

SAMPLING DATA

Sample ID: MW-D15
Sampling Time: NA
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: NA
Sampling Device: Bailer
Sampling Personnel: NA
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl

Laboratory: PACE

Comments: *Could Not be located due to construction Activities. Possibly destroyed.

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-D16

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and Cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): 2"
Well Construction: PVC
Depth to Bottom (ft): 29.05
Depth to LNAPL (ft): NP
Depth to Water (ft): 11.92
Depth to DNAPL (ft): NP
Measuring Point: TOC
Height of Water Column (ft): 17.14
Volume of Water in Casing (gal): 2.74
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
(2)	0.16
4	0.65
6	1.47
8	2.61

Purge Method: Bailer
Purge Start/Stop: 1035 / 1045
Purge Volume (gal.): ~8.5

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: Clear
After Purging: Clear
Include note even if well not purged (i.e, bulk product)

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0830

Field Parameters	*Units*	*Value*
Date Measured		11-13-19
Time Measured	-	1040
Temperature	Celsius	16.76
pH	Std. Units	7.37
Specific Conductance	~~mS~~ uS/cm	1346
Oxidation/Reduction Potential	mV	-71.6
Dissolved Oxygen	mg/L	2.82
Turbidity	NTU	NA

SAMPLING DATA

Sample ID: MW-D16
Sampling Time: 1050
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: 11-13-19
Sampling Device: Bailer
Sampling Personnel: A. Seman
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl
Laboratory: PACE

Comments:

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-9

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.):	4"
Well Construction:	PVC
Depth to Bottom (ft):	86.42
Depth to LNAPL (ft):	NP
Depth to Water (ft):	9.14
Depth to DNAPL (ft):	NP
Measuring Point:	TOC
Height of Water Column (ft):	77.28
Volume of Water in Casing (gal):	50.23

(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
2	0.16
(4)	0.65
6	1.47
8	2.61

Purge Method: Submersible Pump
Purge Start/Stop: 1300 / 1330
Purge Volume (gal.): ~150

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):

Before Purging: Clear, No odor
After Purging: clear, No odor

Include note even if well not purged (i.e, bulk product)

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11/7/19 0930

Field Parameters	*Units*	*Value*
Date Measured	-	11-12-19
Time Measured	-	1310
Temperature	Celsius	14.50
pH	Std. Units	5.09
Specific Conductance	ms/cm[C]	1326
Oxidation/Reduction Potential	mV	-32.1
Dissolved Oxygen	mg/L	4.49
Turbidity	NTU	

SAMPLING DATA

Sample ID: MW-9
Sampling Time: 1335
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: 11-12-19
Sampling Device: Submersible Pump
Sampling Personnel: A. Seman
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl

Laboratory: PACE

Comments: Equipment Blank # 2 collected at 1345

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-11

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: Cloudy and 45
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): 4"
Well Construction: PVC
Depth to Bottom (ft): 77.50
Depth to LNAPL (ft): NP
Depth to Water (ft): 8.98
Depth to DNAPL (ft): NP
Measuring Point: TOC
Height of Water Column (ft): 68.52
Volume of Water in Casing (gal): 44.54
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
2	0.16
(4)	0.65
6	1.47
8	2.61

Purge Method: Submersible Pump
Purge Start/Stop: 1135 / 1200
Purge Volume (gal.): ~140

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: Clear - no odor
After Purging: Clear - no odor
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0830

Field Parameters	*Units*	*Value*
Date Measured	-	11-12-19
Time Measured	-	1140
Temperature	Celsius	17.66
pH	Std. Units	9.15
Specific Conductance	mS ms/cm^C	1211
Oxidation/Reduction Potential	mV	-59.3
Dissolved Oxygen	mg/L	3.97
Turbidity	NTU	NA

SAMPLING DATA

Sample ID: MW-11
Sampling Time: 1205
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: 11-12-19
Sampling Device: Submersible Pump
Sampling Personnel: A. Seman
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl
Laboratory: PACE

Comments:

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: MW-12

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): 4"
Well Construction: PVC
Depth to Bottom (ft): 88.64
Depth to LNAPL (ft): NP
Depth to Water (ft): 14.05
Depth to DNAPL (ft): NP
Measuring Point: TOC
Height of Water Column (ft): 74.59
Volume of Water in Casing (gal): 48.48
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
2	0.16
(4)	0.65
6	1.47
8	2.61

Purge Method: Submersible Pump
Purge Start/Stop: 1035 / 1105
Purge Volume (gal.): ~150

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: Clear NO Sheen
After Purging: Clear NO Sheen - Sulfur odor
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11-12-19 / 0830

Field Parameters	*Units*	*Value*
Date Measured		11-12-19
Time Measured		1040
Temperature	Celsius	13.62
pH	Std. Units	11-12-19 ~~7.91~~ 8.32
Specific Conductance	~~us~~ ms/cm	1491
Oxidation/Reduction Potential	mV	-80.1
Dissolved Oxygen	mg/L	5.01
Turbidity	NTU	NA

SAMPLING DATA

Sample ID: MW-12
Sampling Time: 1110
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: 11-12-19
Sampling Device: Submersible Pump
Sampling Personnel: A. Seman
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl
Laboratory: PACE

Comments:

WELL PURGING AND SAMPLING LOG

PA Transformer Technology, Inc. (Canonsburg, PA)

WELL NO.: PZ-D14

Area of Concern: Building 20/25 Area
Event (Semi-annual/Annual): Annual
Date: 11-11-19
Weather: 45 and Cloudy
Personnel: A. Seman
Project #: 0705598

Well Diameter (in.): 4"
Well Construction: PVC
Depth to Bottom (ft): 86.15
Depth to LNAPL (ft): NP
Depth to Water (ft): 16.56
Depth to DNAPL (ft): NP
Measuring Point: ToC
Height of Water Column (ft): 69.59
Volume of Water in Casing (gal): 45.23
(Vol. = conversion factor x height of water column)

Well Diam. (inches)	Conversion Factor (Gal/Foot)
1	0.04
2	0.16
(4)	0.65
6	1.47
8	2.61

Purge Method: Submersible Pump
Purge Start/Stop: 0930 / 1005
Purge Volume (gal.): 140

Describe water appearance/observations (e.g., Clear/cloudy, visible LNAPL/DNAPL, petroleum odors/sheen, etc.):
Before Purging: Slightly Cloudy slight brownish color, no sheen
After Purging: Clear No Sheen
**Include note even if well not purged (i.e, bulk product)*

WATER QUALITY INDICATOR PARAMETERS (Annual Event Only)

Meter Calibration (Date/Time): 11/12/19 0930

Field Parameters	*Units*	*Value*
Date Measured		11-12-19
Time Measured		0950
Temperature	Celsius	13.48
pH	Std. Units	7.54
Specific Conductance	ms/cm^c (mS/cm^3)	575
Oxidation/Reduction Potential	mV	116.0
Dissolved Oxygen	mg/L	5.25
Turbidity	NTU	NA

SAMPLING DATA

Sample ID: PZ-D14
Sampling Time: 1010
Analyses (circle):

(VOCs (8260)) (TPH (GRO/DRO) (8015))
(PCBs (8082)) (Chlordane (8081))

Sampling Date: 11-12-19
Sampling Device: Submersible Pump
Sampling Personnel: A. Seman
Containers (No./Type/Size): 3 - 1L Amber - Unpreserved
5 - 40ml - HCl
Laboratory: PACE

Comments:

Appendix C – Former Tank Farm Area Laboratory Analytical Reports, November 2019

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

December 03, 2019

GES Great Lakes Region
Groundwater & Environmental Services, Inc.
301 Commerce Park Drive
Cranberry Twp, PA 16066

RE: Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

Dear GES Lakes Region:
Enclosed are the analytical results for sample(s) received by the laboratory on November 14, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rachel Christner
rachel.christner@pacelabs.com
724-850-5611
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30335579001	**PZ-5**	EPA 8015D	SEL	2	PASI-PA
		EPA 8081B	TAW	3	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335579002	**Duplicate -1**	EPA 8082A	CWB	9	PASI-PA
		EPA 8260B	KAC	39	PASI-PA

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

Sample: PZ-5 **Lab ID: 30335579001** Collected: 11/13/19 09:10 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D Preparation Method: EPA 3510C							
TPH (C10-C28)	**0.59**	mg/L	0.11	1	11/19/19 11:41	11/20/19 13:25		
Surrogates								
o-Terphenyl (S)	67	%.	17-90	1	11/19/19 11:41	11/20/19 13:25	84-15-1	
8081B Organochlorine Pesticide	Analytical Method: EPA 8081B Preparation Method: EPA 3510C							
Chlordane (Technical)	ND	ug/L	0.26	1	11/19/19 13:34	11/21/19 20:06	57-74-9	1c
Surrogates								
Tetrachloro-m-xylene (S)	67	%.	40-102	1	11/19/19 13:34	11/21/19 20:06	877-09-8	
Decachlorobiphenyl (S)	69	%.	10-129	1	11/19/19 13:34	11/21/19 20:06	2051-24-3	
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.26	1	11/19/19 13:34	11/22/19 12:32	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.26	1	11/19/19 13:34	11/22/19 12:32	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.26	1	11/19/19 13:34	11/22/19 12:32	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.26	1	11/19/19 13:34	11/22/19 12:32	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.26	1	11/19/19 13:34	11/22/19 12:32	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.26	1	11/19/19 13:34	11/22/19 12:32	11097-69-1	
PCB-1260 (Aroclor 1260)	**1.6**	ug/L	0.26	1	11/19/19 13:34	11/22/19 12:32	11096-82-5	2c
Surrogates								
Tetrachloro-m-xylene (S)	68	%.	36-108	1	11/19/19 13:34	11/22/19 12:32	877-09-8	
Decachlorobiphenyl (S)	82	%.	10-120	1	11/19/19 13:34	11/22/19 12:32	2051-24-3	CH
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/16/19 01:40		
Surrogates								
4-Bromofluorobenzene (S)	94	%.	80-120	1		11/16/19 01:40	460-00-4	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/21/19 21:25	67-64-1	
Benzene	ND	ug/L	1.0	1		11/21/19 21:25	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/21/19 21:25	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/21/19 21:25	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/21/19 21:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/21/19 21:25	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/21/19 21:25	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/21/19 21:25	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/21/19 21:25	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/21/19 21:25	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/21/19 21:25	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/21/19 21:25	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/21/19 21:25	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/21/19 21:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/21/19 21:25	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/21/19 21:25	75-35-4	
cis-1,2-Dichloroethene	**42.8**	ug/L	1.0	1		11/21/19 21:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/21/19 21:25	156-60-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

Sample: PZ-5 **Lab ID: 30335579001** Collected: 11/13/19 09:10 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
1,2-Dichloropropane	ND	ug/L	1.0	1		11/21/19 21:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/21/19 21:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/21/19 21:25	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/21/19 21:25	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/21/19 21:25	591-78-6	
Methylene Chloride	**1.1**	ug/L	1.0	1		11/21/19 21:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/21/19 21:25	108-10-1	
Styrene	ND	ug/L	1.0	1		11/21/19 21:25	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/21/19 21:25	79-34-5	
Tetrachloroethene	**198**	ug/L	1.0	1		11/21/19 21:25	127-18-4	
Toluene	ND	ug/L	1.0	1		11/21/19 21:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/21/19 21:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/21/19 21:25	79-00-5	
Trichloroethene	**29.1**	ug/L	1.0	1		11/21/19 21:25	79-01-6	
Vinyl chloride	**20.8**	ug/L	1.0	1		11/21/19 21:25	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/21/19 21:25	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/21/19 21:25	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	102	%.	78-122	1		11/21/19 21:25	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%.	80-120	1		11/21/19 21:25	17060-07-0	
Toluene-d8 (S)	94	%.	80-120	1		11/21/19 21:25	2037-26-5	
Dibromofluoromethane (S)	97	%.	80-120	1		11/21/19 21:25	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

Sample: Duplicate -1 **Lab ID: 30335579002** Collected: 11/13/19 00:00 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.24	1	11/19/19 13:34	11/22/19 12:40	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.24	1	11/19/19 13:34	11/22/19 12:40	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.24	1	11/19/19 13:34	11/22/19 12:40	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.24	1	11/19/19 13:34	11/22/19 12:40	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.24	1	11/19/19 13:34	11/22/19 12:40	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.24	1	11/19/19 13:34	11/22/19 12:40	11097-69-1	
PCB-1260 (Aroclor 1260)	**2.4**	ug/L	0.24	1	11/19/19 13:34	11/22/19 12:40	11096-82-5	C2
Surrogates								
Tetrachloro-m-xylene (S)	71	%.	36-108	1	11/19/19 13:34	11/22/19 12:40	877-09-8	
Decachlorobiphenyl (S)	71	%.	10-120	1	11/19/19 13:34	11/22/19 12:40	2051-24-3	CH
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/21/19 20:35	67-64-1	
Benzene	ND	ug/L	1.0	1		11/21/19 20:35	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/21/19 20:35	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/21/19 20:35	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/21/19 20:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/21/19 20:35	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/21/19 20:35	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/21/19 20:35	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/21/19 20:35	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/21/19 20:35	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/21/19 20:35	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/21/19 20:35	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/21/19 20:35	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/21/19 20:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/21/19 20:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/21/19 20:35	75-35-4	
cis-1,2-Dichloroethene	**45.3**	ug/L	1.0	1		11/21/19 20:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/21/19 20:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/21/19 20:35	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/21/19 20:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/21/19 20:35	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/21/19 20:35	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/21/19 20:35	591-78-6	
Methylene Chloride	**1.3**	ug/L	1.0	1		11/21/19 20:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/21/19 20:35	108-10-1	
Styrene	ND	ug/L	1.0	1		11/21/19 20:35	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/21/19 20:35	79-34-5	
Tetrachloroethene	**238**	ug/L	1.0	1		11/21/19 20:35	127-18-4	
Toluene	ND	ug/L	1.0	1		11/21/19 20:35	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/21/19 20:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/21/19 20:35	79-00-5	
Trichloroethene	**31.5**	ug/L	1.0	1		11/21/19 20:35	79-01-6	
Vinyl chloride	**26.3**	ug/L	1.0	1		11/21/19 20:35	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/21/19 20:35	179601-23-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

Sample: Duplicate -1 **Lab ID: 30335579002** Collected: 11/13/19 00:00 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
o-Xylene	ND	ug/L	1.0	1		11/21/19 20:35	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	103	%.	78-122	1		11/21/19 20:35	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%.	80-120	1		11/21/19 20:35	17060-07-0	
Toluene-d8 (S)	96	%.	80-120	1		11/21/19 20:35	2037-26-5	
Dibromofluoromethane (S)	97	%.	80-120	1		11/21/19 20:35	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

QC Batch: 371203 Analysis Method: EPA 5030/8015B
QC Batch Method: EPA 5030/8015B Analysis Description: Gasoline Range Organics
Associated Lab Samples: 30335579001

METHOD BLANK: 1801114 Matrix: Water
Associated Lab Samples: 30335579001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH (C06-C10)	ug/L	ND	200	11/15/19 18:26	
4-Bromofluorobenzene (S)	%.	95	80-120	11/15/19 18:26	

LABORATORY CONTROL SAMPLE: 1801115

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH (C06-C10)	ug/L	1000	791	79	66-129	
4-Bromofluorobenzene (S)	%.			97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1801116 1801117

Parameter	Units	30335167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH (C06-C10)	ug/L	ND	1000	1000	853	899	84	89	51-126	5	
4-Bromofluorobenzene (S)	%.						99	100	80-120		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

QC Batch: 372168 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV
Associated Lab Samples: 30335579001, 30335579002

METHOD BLANK: 1805715 Matrix: Water
Associated Lab Samples: 30335579001, 30335579002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	11/21/19 13:58	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/21/19 13:58	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/21/19 13:58	
1,1-Dichloroethane	ug/L	ND	1.0	11/21/19 13:58	
1,1-Dichloroethene	ug/L	ND	1.0	11/21/19 13:58	
1,2-Dichloroethane	ug/L	ND	1.0	11/21/19 13:58	
1,2-Dichloropropane	ug/L	ND	1.0	11/21/19 13:58	
2-Butanone (MEK)	ug/L	ND	10.0	11/21/19 13:58	
2-Hexanone	ug/L	ND	10.0	11/21/19 13:58	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	11/21/19 13:58	
Acetone	ug/L	ND	10.0	11/21/19 13:58	
Benzene	ug/L	ND	1.0	11/21/19 13:58	
Bromodichloromethane	ug/L	ND	1.0	11/21/19 13:58	
Bromoform	ug/L	ND	1.0	11/21/19 13:58	
Bromomethane	ug/L	ND	1.0	11/21/19 13:58	
Carbon disulfide	ug/L	ND	1.0	11/21/19 13:58	
Carbon tetrachloride	ug/L	ND	1.0	11/21/19 13:58	
Chlorobenzene	ug/L	ND	1.0	11/21/19 13:58	
Chloroethane	ug/L	ND	1.0	11/21/19 13:58	
Chloroform	ug/L	ND	1.0	11/21/19 13:58	
Chloromethane	ug/L	ND	1.0	11/21/19 13:58	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/21/19 13:58	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/21/19 13:58	
Dibromochloromethane	ug/L	ND	1.0	11/21/19 13:58	
Ethylbenzene	ug/L	ND	1.0	11/21/19 13:58	
m&p-Xylene	ug/L	ND	2.0	11/21/19 13:58	
Methylene Chloride	ug/L	ND	1.0	11/21/19 13:58	
o-Xylene	ug/L	ND	1.0	11/21/19 13:58	
Styrene	ug/L	ND	1.0	11/21/19 13:58	
Tetrachloroethene	ug/L	ND	1.0	11/21/19 13:58	
Toluene	ug/L	ND	1.0	11/21/19 13:58	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/21/19 13:58	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/21/19 13:58	
Trichloroethene	ug/L	ND	1.0	11/21/19 13:58	
Vinyl chloride	ug/L	ND	1.0	11/21/19 13:58	
1,2-Dichloroethane-d4 (S)	%.	98	80-120	11/21/19 13:58	
4-Bromofluorobenzene (S)	%.	99	78-122	11/21/19 13:58	
Dibromofluoromethane (S)	%.	100	80-120	11/21/19 13:58	
Toluene-d8 (S)	%.	95	80-120	11/21/19 13:58	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

LABORATORY CONTROL SAMPLE: 1805716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.9	105	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	18.6	93	70-130	
1,1,2-Trichloroethane	ug/L	20	18.5	92	70-130	
1,1-Dichloroethane	ug/L	20	17.6	88	68-121	
1,1-Dichloroethene	ug/L	20	16.9	84	63-129	
1,2-Dichloroethane	ug/L	20	18.0	90	67-117	
1,2-Dichloropropane	ug/L	20	18.4	92	69-121	
2-Butanone (MEK)	ug/L	20	17.5	88	59-128	
2-Hexanone	ug/L	20	18.6	93	49-145	
4-Methyl-2-pentanone (MIBK)	ug/L	20	19.4	97	63-126	
Acetone	ug/L	20	21.6	108	37-150	
Benzene	ug/L	20	18.7	94	70-130	
Bromodichloromethane	ug/L	20	18.2	91	70-130	
Bromoform	ug/L	20	17.1	86	65-130	
Bromomethane	ug/L	20	16.7	84	45-148	
Carbon disulfide	ug/L	20	17.8	89	55-123	
Carbon tetrachloride	ug/L	20	18.0	90	69-126	
Chlorobenzene	ug/L	20	19.6	98	70-130	
Chloroethane	ug/L	20	19.2	96	68-146	
Chloroform	ug/L	20	18.7	93	69-116	
Chloromethane	ug/L	20	20.5	103	56-129	
cis-1,2-Dichloroethene	ug/L	20	18.0	90	66-118	
cis-1,3-Dichloropropene	ug/L	20	17.7	89	70-130	
Dibromochloromethane	ug/L	20	18.1	90	70-130	
Ethylbenzene	ug/L	20	19.4	97	70-130	
m&p-Xylene	ug/L	40	39.3	98	70-130	
Methylene Chloride	ug/L	20	17.6	88	65-124	
o-Xylene	ug/L	20	18.6	93	70-130	
Styrene	ug/L	20	19.6	98	70-130	
Tetrachloroethene	ug/L	20	20.1	100	70-130	
Toluene	ug/L	20	18.7	93	70-130	
trans-1,2-Dichloroethene	ug/L	20	18.1	90	64-123	
trans-1,3-Dichloropropene	ug/L	20	18.5	92	68-119	
Trichloroethene	ug/L	20	19.4	97	70-130	
Vinyl chloride	ug/L	20	20.0	100	70-130	
1,2-Dichloroethane-d4 (S)	%.			98	80-120	
4-Bromofluorobenzene (S)	%.			98	78-122	
Dibromofluoromethane (S)	%.			99	80-120	
Toluene-d8 (S)	%.			97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1805717 1805718

Parameter	Units	30335265001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	19.3	22.6	97	113	67-127	16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1805717 1805718

Parameter	Units	30335265001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.7	19.2	84	96	55-118	14	
1,1,2-Trichloroethane	ug/L	ND	20	20	17.1	20.5	85	103	60-117	18	
1,1-Dichloroethane	ug/L	ND	20	20	17.0	20.1	85	100	68-118	17	
1,1-Dichloroethene	ug/L	ND	20	20	16.4	19.6	82	98	62-126	18	
1,2-Dichloroethane	ug/L	ND	20	20	16.6	19.9	83	100	67-117	18	
1,2-Dichloropropane	ug/L	ND	20	20	16.8	20.1	84	101	61-128	18	
2-Butanone (MEK)	ug/L	ND	20	20	16.6	14.4	83	72	63-175	14	
2-Hexanone	ug/L	ND	20	20	17.9	15.8	89	79	65-151	12	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	20	20	18.9	16.5	95	83	66-149	14	
Acetone	ug/L	ND	20	20	18.8	15.7	94	78	10-175	18	
Benzene	ug/L	ND	20	20	17.4	20.2	87	101	67-119	15	
Bromodichloromethane	ug/L	ND	20	20	16.1	19.3	81	97	67-126	18	
Bromoform	ug/L	ND	20	20	13.8	16.3	69	81	43-114	16	
Bromomethane	ug/L	ND	20	20	16.7	15.5	84	77	10-164	8	
Carbon disulfide	ug/L	ND	20	20	18.4	16.8	92	84	37-135	9	
Carbon tetrachloride	ug/L	ND	20	20	15.7	18.9	78	94	60-137	18	
Chlorobenzene	ug/L	ND	20	20	17.8	20.9	89	105	68-119	16	
Chloroethane	ug/L	ND	20	20	21.4	17.6	107	88	54-169	20	
Chloroform	ug/L	ND	20	20	17.2	19.5	86	98	69-113	13	
Chloromethane	ug/L	ND	20	20	22.1	18.6	110	93	43-159	17	
cis-1,2-Dichloroethene	ug/L	ND	20	20	16.2	19.2	81	96	65-121	17	
cis-1,3-Dichloropropene	ug/L	ND	20	20	16.0	18.8	80	94	61-120	16	
Dibromochloromethane	ug/L	ND	20	20	15.0	17.6	75	88	56-121	16	
Ethylbenzene	ug/L	ND	20	20	18.1	21.0	91	105	69-127	15	
m&p-Xylene	ug/L	ND	40	40	36.5	43.4	91	109	70-129	17	
Methylene Chloride	ug/L	ND	20	20	15.2	19.6	76	98	49-144	25	
o-Xylene	ug/L	ND	20	20	17.3	20.5	87	102	68-126	17	
Styrene	ug/L	ND	20	20	17.9	21.2	90	106	65-120	17	
Tetrachloroethene	ug/L	ND	20	20	18.7	21.6	94	108	64-123	14	
Toluene	ug/L	ND	20	20	17.5	20.6	87	103	70-130	16	
trans-1,2-Dichloroethene	ug/L	ND	20	20	17.1	19.3	85	96	66-119	12	
trans-1,3-Dichloropropene	ug/L	ND	20	20	16.6	19.0	83	95	52-117	14	
Trichloroethene	ug/L	ND	20	20	18.2	21.4	91	107	63-125	16	
Vinyl chloride	ug/L	ND	20	20	22.1	18.5	110	92	60-133	18	
1,2-Dichloroethane-d4 (S)	%.						97	100	80-120		
4-Bromofluorobenzene (S)	%.						100	98	78-122		
Dibromofluoromethane (S)	%.						98	101	80-120		
Toluene-d8 (S)	%.						97	98	80-120		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

QC Batch: 371493 Analysis Method: EPA 8015D
QC Batch Method: EPA 3510C Analysis Description: EPA 8015D TPH
Associated Lab Samples: 30335579001

METHOD BLANK: 1802691 Matrix: Water
Associated Lab Samples: 30335579001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH (C10-C28)	mg/L	ND	0.10	11/20/19 11:04	
o-Terphenyl (S)	%.	74	17-90	11/20/19 11:04	

LABORATORY CONTROL SAMPLE: 1802692

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH (C10-C28)	mg/L	1	0.83	83	43-107	
o-Terphenyl (S)	%.			79	17-90	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1802693 1802694

Parameter	Units	30335790001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH (C10-C28)	mg/L	0.13	0.98	0.98	0.66	0.84	53	72	26-112	24	
o-Terphenyl (S)	%.						58	77	17-90		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

QC Batch: 371492
QC Batch Method: EPA 3510C
Analysis Method: EPA 8081B
Analysis Description: 8081A GCS Pesticides
Associated Lab Samples: 30335579001

METHOD BLANK: 1802688
Matrix: Water
Associated Lab Samples: 30335579001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.25	11/21/19 21:04	
Decachlorobiphenyl (S)	%.	78	10-129	11/21/19 21:04	
Tetrachloro-m-xylene (S)	%.	79	40-102	11/21/19 21:04	

LABORATORY CONTROL SAMPLE: 1802689

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlordane (Technical)	ug/L	2.5	1.9	77	47-112	
Decachlorobiphenyl (S)	%.			68	10-129	
Tetrachloro-m-xylene (S)	%.			76	40-102	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

QC Batch: 371491 Analysis Method: EPA 8082A
QC Batch Method: EPA 3510C Analysis Description: 8082A GCS PCB Mod
Associated Lab Samples: 30335579001, 30335579002

METHOD BLANK: 1802684 Matrix: Water
Associated Lab Samples: 30335579001, 30335579002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	ND	0.25	11/21/19 14:57	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1232 (Aroclor 1232)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1242 (Aroclor 1242)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1248 (Aroclor 1248)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1254 (Aroclor 1254)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1260 (Aroclor 1260)	ug/L	ND	0.25	11/21/19 14:57	CH
Decachlorobiphenyl (S)	%.	87	10-120	11/21/19 14:57	
Tetrachloro-m-xylene (S)	%.	82	36-108	11/21/19 14:57	

LABORATORY CONTROL SAMPLE: 1802685

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	2.5	2.1	83	45-121	
PCB-1260 (Aroclor 1260)	ug/L	2.5	2.3	91	50-121	CH
Decachlorobiphenyl (S)	%.			63	10-120	
Tetrachloro-m-xylene (S)	%.			79	36-108	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1802686 1802687

Parameter	Units	30335183004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
PCB-1016 (Aroclor 1016)	ug/L	ND	2.4	2.5	5.9	5.7	242	232	27-137	3	D3,MH
PCB-1260 (Aroclor 1260)	ug/L	ND	2.4	2.5	71.7	60.5	2940	2460	18-139	17	CH,D3,E, MH
Decachlorobiphenyl (S)	%.						108	109	10-120		CH
Tetrachloro-m-xylene (S)	%.						86	87	36-108		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA	Pace Analytical Services - Greensburg

BATCH QUALIFIERS

Batch: 371492

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1c	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
2c	The result for AR1260 is reported from the DB-CLP2 column due to a high response on the DB-CLP1 column. The higher of the two results is reported.
C2	Relative percent difference between results from each column was greater than 40%. The lower of the two results was reported.
CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
MH	Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335579

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30335579001	**PZ-5**	EPA 3510C	371493	EPA 8015D	371734
30335579001	**PZ-5**	EPA 3510C	371492	EPA 8081B	371789
30335579001	**PZ-5**	EPA 3510C	371491	EPA 8082A	371791
30335579002	**Duplicate -1**	EPA 3510C	371491	EPA 8082A	371791
30335579001	**PZ-5**	EPA 5030/8015B	371203		
30335579001	**PZ-5**	EPA 8260B	372168		
30335579002	**Duplicate -1**	EPA 8260B	372168		

WO# : 30335579

30335579

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY

Company: GES, Inc.

Billing Information: gesinvoices@gesonline.com

Address: 301 Commerce Park Drive, Cranberry Township, PA 16066

Container Preservative Type **

U,3	3	U	U							

Lab Project Manager:

Report To: Erin Letrick

Email To: GreatLakesRegion@gesonline.com

Copy To:

Site Collection Info/Address: PTTI 30 Curry Ave.

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Customer Project Name/Number: PTTI (Former Tank Field Area)

State: PA County/City: Washington/Canonsburg Time Zone Collected: [ ] PT [ ] MT [ ] CT [✓] ET

Analyses

Lab Profile/Line:

Phone: 800-267-2549

Email:

Site/Facility ID #: 0705598/62/882 Org #1407

Compliance Monitoring? [ ] Yes [✓] No

Collected By (print): Addison Soman

Purchase Order #:

Quote #: 11899-00

DW PWS ID #:

DW Location Code:

Collected By (signature):

Turnaround Date Required: Standard 10-day TAT

Immediately Packed on Ice: [✓] Yes [ ] No

Sample Disposal: [✓] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____

Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [✓] No

Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	TPH (GRO/DRO) (8015)	VOC 8260B	PCB (8082)	Chlordane (8081)
P2-5	GW	Grab			11-13-19	0910		4	X	X	X	X
Duplicate - 1	GW	Grab			11-13-19	0900		4		X	X	

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles Intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples Received on Ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips: _____			
Sample pH Acceptable	Y	N	NA
pH Strips: 130039			
Sulfide Present	Y	N	NA
Lead Acetate Strips: _____			

LAB USE ONLY:
Lab Sample # / Comments:

DRB/OHP

04
02

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used: bubble bags

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: NA

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: 11
Cooler 1 Temp Upon Receipt: 38/35
Cooler 1 Therm Corr. Factor: 0 °C
Cooler 1 Corrected Temp: 38/35
Comments:

DRB 11/14/19

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 1

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Addison Soman / GES	11-13-19 / 1515	Samples Receiving / GES	11-13-19 / 1515
Samples Receiving / GES		Paul Grabenauer	11-14-19 1145
Paul Grabenauer	11-14-19 1730		11/14/19 1737

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

November 25, 2019

GES Great Lakes Region
Groundwater & Environmental Services, Inc.
301 Commerce Park Drive
Cranberry Twp, PA 16066

RE: Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

Dear GES Lakes Region:
Enclosed are the analytical results for sample(s) received by the laboratory on November 14, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rachel Christner
rachel.christner@pacelabs.com
724-850-5611
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30335577001	**PZ-13**	EPA 8015D	SEL	2	PASI-PA
		EPA 8081B	TAW	3	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335577002	**PZ-21**	EPA 8015D	SEL	2	PASI-PA
		EPA 8081B	TAW	3	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335577003	**Trip Blank -2**	EPA 8260B	KAC	39	PASI-PA

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ANALYTICAL RESULTS

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

Sample: PZ-13 **Lab ID: 30335577001** Collected: 11/13/19 13:30 Received: 11/14/19 17:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D	Preparation Method: EPA 3510C						
TPH (C10-C28)	**0.44**	mg/L	0.11	1	11/19/19 11:41	11/20/19 12:40		
Surrogates								
o-Terphenyl (S)	54	%.	17-90	1	11/19/19 11:41	11/20/19 12:40	84-15-1	
8081B Organochlorine Pesticide	Analytical Method: EPA 8081B	Preparation Method: EPA 3510C						
Chlordane (Technical)	ND	ug/L	0.27	1	11/19/19 13:34	11/21/19 20:35	57-74-9	1c
Surrogates								
Tetrachloro-m-xylene (S)	71	%.	40-102	1	11/19/19 13:34	11/21/19 20:35	877-09-8	
Decachlorobiphenyl (S)	51	%.	10-129	1	11/19/19 13:34	11/21/19 20:35	2051-24-3	
8082A GCS PCB	Analytical Method: EPA 8082A	Preparation Method: EPA 3510C						
PCB-1016 (Aroclor 1016)	ND	ug/L	0.54	2	11/19/19 13:34	11/22/19 12:15	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.54	2	11/19/19 13:34	11/22/19 12:15	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.54	2	11/19/19 13:34	11/22/19 12:15	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.54	2	11/19/19 13:34	11/22/19 12:15	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.54	2	11/19/19 13:34	11/22/19 12:15	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.54	2	11/19/19 13:34	11/22/19 12:15	11097-69-1	
PCB-1260 (Aroclor 1260)	**6.0**	ug/L	0.54	2	11/19/19 13:34	11/22/19 12:15	11096-82-5	2c
Surrogates								
Tetrachloro-m-xylene (S)	82	%.	36-108	2	11/19/19 13:34	11/22/19 12:15	877-09-8	
Decachlorobiphenyl (S)	65	%.	10-120	2	11/19/19 13:34	11/22/19 12:15	2051-24-3	CH
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/16/19 00:24		
Surrogates								
4-Bromofluorobenzene (S)	95	%.	80-120	1		11/16/19 00:24	460-00-4	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 15:23	67-64-1	
Benzene	ND	ug/L	1.0	1		11/20/19 15:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 15:23	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 15:23	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 15:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 15:23	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 15:23	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 15:23	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/20/19 15:23	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 15:23	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 15:23	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 15:23	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 15:23	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 15:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 15:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 15:23	75-35-4	
cis-1,2-Dichloroethene	**3.2**	ug/L	1.0	1		11/20/19 15:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 15:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 15:23	78-87-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

Sample: PZ-13 **Lab ID: 30335577001** Collected: 11/13/19 13:30 Received: 11/14/19 17:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 15:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 15:23	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 15:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 15:23	591-78-6	
Methylene Chloride	**1.2**	ug/L	1.0	1		11/20/19 15:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 15:23	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 15:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 15:23	79-34-5	
Tetrachloroethene	**12.9**	ug/L	1.0	1		11/20/19 15:23	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 15:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 15:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 15:23	79-00-5	
Trichloroethene	**2.9**	ug/L	1.0	1		11/20/19 15:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/20/19 15:23	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 15:23	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/20/19 15:23	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	101	%.	78-122	1		11/20/19 15:23	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%.	80-120	1		11/20/19 15:23	17060-07-0	
Toluene-d8 (S)	93	%.	80-120	1		11/20/19 15:23	2037-26-5	
Dibromofluoromethane (S)	102	%.	80-120	1		11/20/19 15:23	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

Sample: PZ-21 **Lab ID: 30335577002** Collected: 11/13/19 13:55 Received: 11/14/19 17:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D Preparation Method: EPA 3510C							
TPH (C10-C28)	**2.6**	mg/L	1.0	10	11/19/19 11:41	11/20/19 15:11		
Surrogates								
o-Terphenyl (S)	62	%.	17-90	10	11/19/19 11:41	11/20/19 15:11	84-15-1	
8081B Organochlorine Pesticide	Analytical Method: EPA 8081B Preparation Method: EPA 3510C							
Chlordane (Technical)	ND	ug/L	0.25	1	11/19/19 13:34	11/21/19 20:25	57-74-9	1c
Surrogates								
Tetrachloro-m-xylene (S)	72	%.	40-102	1	11/19/19 13:34	11/21/19 20:25	877-09-8	
Decachlorobiphenyl (S)	62	%.	10-129	1	11/19/19 13:34	11/21/19 20:25	2051-24-3	
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.25	1	11/19/19 13:34	11/22/19 12:23	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.25	1	11/19/19 13:34	11/22/19 12:23	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.25	1	11/19/19 13:34	11/22/19 12:23	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.25	1	11/19/19 13:34	11/22/19 12:23	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.25	1	11/19/19 13:34	11/22/19 12:23	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.25	1	11/19/19 13:34	11/22/19 12:23	11097-69-1	
PCB-1260 (Aroclor 1260)	**0.82**	ug/L	0.25	1	11/19/19 13:34	11/22/19 12:23	11096-82-5	C2
Surrogates								
Tetrachloro-m-xylene (S)	69	%.	36-108	1	11/19/19 13:34	11/22/19 12:23	877-09-8	
Decachlorobiphenyl (S)	73	%.	10-120	1	11/19/19 13:34	11/22/19 12:23	2051-24-3	CH
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/16/19 00:43		
Surrogates								
4-Bromofluorobenzene (S)	95	%.	80-120	1		11/16/19 00:43	460-00-4	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 15:47	67-64-1	
Benzene	ND	ug/L	1.0	1		11/20/19 15:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 15:47	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 15:47	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 15:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 15:47	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 15:47	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 15:47	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/20/19 15:47	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 15:47	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 15:47	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 15:47	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 15:47	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 15:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 15:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 15:47	75-35-4	
cis-1,2-Dichloroethene	**2.1**	ug/L	1.0	1		11/20/19 15:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 15:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 15:47	78-87-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

Sample: PZ-21 **Lab ID: 30335577002** Collected: 11/13/19 13:55 Received: 11/14/19 17:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 15:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 15:47	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 15:47	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 15:47	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		11/20/19 15:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 15:47	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 15:47	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 15:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/20/19 15:47	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 15:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 15:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 15:47	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/20/19 15:47	79-01-6	
Vinyl chloride	**1.4**	ug/L	1.0	1		11/20/19 15:47	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 15:47	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/20/19 15:47	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	101	%.	78-122	1		11/20/19 15:47	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%.	80-120	1		11/20/19 15:47	17060-07-0	
Toluene-d8 (S)	94	%.	80-120	1		11/20/19 15:47	2037-26-5	
Dibromofluoromethane (S)	103	%.	80-120	1		11/20/19 15:47	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

Sample: Trip Blank -2 **Lab ID: 30335577003** Collected: 11/13/19 00:00 Received: 11/14/19 17:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 14:33	67-64-1	
Benzene	ND	ug/L	1.0	1		11/20/19 14:33	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 14:33	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 14:33	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 14:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 14:33	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 14:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 14:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/20/19 14:33	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 14:33	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 14:33	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 14:33	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 14:33	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 14:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 14:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 14:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 14:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 14:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 14:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 14:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 14:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 14:33	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 14:33	591-78-6	
Methylene Chloride	**1.9**	ug/L	1.0	1		11/20/19 14:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 14:33	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 14:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 14:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/20/19 14:33	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 14:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 14:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 14:33	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/20/19 14:33	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/20/19 14:33	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 14:33	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/20/19 14:33	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%.	78-122	1		11/20/19 14:33	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%.	80-120	1		11/20/19 14:33	17060-07-0	
Toluene-d8 (S)	95	%.	80-120	1		11/20/19 14:33	2037-26-5	
Dibromofluoromethane (S)	100	%.	80-120	1		11/20/19 14:33	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

QC Batch: 371203 Analysis Method: EPA 5030/8015B
QC Batch Method: EPA 5030/8015B Analysis Description: Gasoline Range Organics
Associated Lab Samples: 30335577001, 30335577002

METHOD BLANK: 1801114 Matrix: Water
Associated Lab Samples: 30335577001, 30335577002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH (C06-C10)	ug/L	ND	200	11/15/19 18:26	
4-Bromofluorobenzene (S)	%.	95	80-120	11/15/19 18:26	

LABORATORY CONTROL SAMPLE: 1801115

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH (C06-C10)	ug/L	1000	791	79	66-129	
4-Bromofluorobenzene (S)	%.			97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1801116 1801117

Parameter	Units	30335167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH (C06-C10)	ug/L	ND	1000	1000	853	899	84	89	51-126	5	
4-Bromofluorobenzene (S)	%.						99	100	80-120		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

QC Batch: 371926 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV
Associated Lab Samples: 30335577001, 30335577002, 30335577003

METHOD BLANK: 1804494 Matrix: Water
Associated Lab Samples: 30335577001, 30335577002, 30335577003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	11/20/19 13:19	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/20/19 13:19	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/20/19 13:19	
1,1-Dichloroethane	ug/L	ND	1.0	11/20/19 13:19	
1,1-Dichloroethene	ug/L	ND	1.0	11/20/19 13:19	
1,2-Dichloroethane	ug/L	ND	1.0	11/20/19 13:19	
1,2-Dichloropropane	ug/L	ND	1.0	11/20/19 13:19	
2-Butanone (MEK)	ug/L	ND	10.0	11/20/19 13:19	
2-Hexanone	ug/L	ND	10.0	11/20/19 13:19	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	11/20/19 13:19	
Acetone	ug/L	ND	10.0	11/20/19 13:19	
Benzene	ug/L	ND	1.0	11/20/19 13:19	
Bromodichloromethane	ug/L	ND	1.0	11/20/19 13:19	
Bromoform	ug/L	ND	1.0	11/20/19 13:19	
Bromomethane	ug/L	ND	1.0	11/20/19 13:19	
Carbon disulfide	ug/L	ND	1.0	11/20/19 13:19	
Carbon tetrachloride	ug/L	ND	1.0	11/20/19 13:19	
Chlorobenzene	ug/L	ND	1.0	11/20/19 13:19	
Chloroethane	ug/L	ND	1.0	11/20/19 13:19	
Chloroform	ug/L	ND	1.0	11/20/19 13:19	
Chloromethane	ug/L	ND	1.0	11/20/19 13:19	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/20/19 13:19	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/20/19 13:19	
Dibromochloromethane	ug/L	ND	1.0	11/20/19 13:19	
Ethylbenzene	ug/L	ND	1.0	11/20/19 13:19	
m&p-Xylene	ug/L	ND	2.0	11/20/19 13:19	
Methylene Chloride	ug/L	ND	1.0	11/20/19 13:19	
o-Xylene	ug/L	ND	1.0	11/20/19 13:19	
Styrene	ug/L	ND	1.0	11/20/19 13:19	
Tetrachloroethene	ug/L	ND	1.0	11/20/19 13:19	
Toluene	ug/L	ND	1.0	11/20/19 13:19	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/20/19 13:19	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/20/19 13:19	
Trichloroethene	ug/L	ND	1.0	11/20/19 13:19	
Vinyl chloride	ug/L	ND	1.0	11/20/19 13:19	
1,2-Dichloroethane-d4 (S)	%.	103	80-120	11/20/19 13:19	
4-Bromofluorobenzene (S)	%.	100	78-122	11/20/19 13:19	
Dibromofluoromethane (S)	%.	100	80-120	11/20/19 13:19	
Toluene-d8 (S)	%.	95	80-120	11/20/19 13:19	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

LABORATORY CONTROL SAMPLE: 1804495

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.0	100	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	18.0	90	70-130	
1,1,2-Trichloroethane	ug/L	20	19.0	95	70-130	
1,1-Dichloroethane	ug/L	20	18.2	91	68-121	
1,1-Dichloroethene	ug/L	20	17.3	86	63-129	
1,2-Dichloroethane	ug/L	20	18.3	91	67-117	
1,2-Dichloropropane	ug/L	20	17.9	89	69-121	
2-Butanone (MEK)	ug/L	20	19.6	98	59-128	
2-Hexanone	ug/L	20	17.9	89	49-145	
4-Methyl-2-pentanone (MIBK)	ug/L	20	19.8	99	63-126	
Acetone	ug/L	20	20.6	103	37-150	
Benzene	ug/L	20	18.7	94	70-130	
Bromodichloromethane	ug/L	20	18.7	93	70-130	
Bromoform	ug/L	20	16.5	83	65-130	
Bromomethane	ug/L	20	17.5	88	45-148	
Carbon disulfide	ug/L	20	19.2	96	55-123	
Carbon tetrachloride	ug/L	20	17.8	89	69-126	
Chlorobenzene	ug/L	20	19.0	95	70-130	
Chloroethane	ug/L	20	19.7	99	68-146	
Chloroform	ug/L	20	17.9	89	69-116	
Chloromethane	ug/L	20	20.3	101	56-129	
cis-1,2-Dichloroethene	ug/L	20	17.3	87	66-118	
cis-1,3-Dichloropropene	ug/L	20	17.6	88	70-130	
Dibromochloromethane	ug/L	20	18.0	90	70-130	
Ethylbenzene	ug/L	20	19.1	95	70-130	
m&p-Xylene	ug/L	40	39.1	98	70-130	
Methylene Chloride	ug/L	20	17.1	86	65-124	
o-Xylene	ug/L	20	18.5	92	70-130	
Styrene	ug/L	20	19.7	99	70-130	
Tetrachloroethene	ug/L	20	19.6	98	70-130	
Toluene	ug/L	20	19.1	96	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.9	89	64-123	
trans-1,3-Dichloropropene	ug/L	20	18.4	92	68-119	
Trichloroethene	ug/L	20	18.7	93	70-130	
Vinyl chloride	ug/L	20	20.6	103	70-130	
1,2-Dichloroethane-d4 (S)	%.			96	80-120	
4-Bromofluorobenzene (S)	%.			98	78-122	
Dibromofluoromethane (S)	%.			99	80-120	
Toluene-d8 (S)	%.			98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1804496 1804497

Parameter	Units	30335830006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	1.0 U	20	20	23.4	21.7	117	109	67-127	7	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1804496 1804497

Parameter	Units	30335830006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	20	20	19.0	18.7	95	94	55-118	1	
1,1,2-Trichloroethane	ug/L	1.0 U	20	20	20.2	19.2	101	96	60-117	5	
1,1-Dichloroethane	ug/L	1.0 U	20	20	20.9	18.7	105	94	68-118	11	
1,1-Dichloroethene	ug/L	1.0 U	20	20	20.4	18.9	102	94	62-126	8	
1,2-Dichloroethane	ug/L	1.0 U	20	20	21.1	18.3	105	91	67-117	14	
1,2-Dichloropropane	ug/L	1.0 U	20	20	19.9	18.3	100	91	61-128	9	
2-Butanone (MEK)	ug/L	10.0 U	20	20	16.7	19.2	84	96	63-175	14	
2-Hexanone	ug/L	10.0 U	20	20	17.4	18.7	87	93	65-151	7	
4-Methyl-2-pentanone (MIBK)	ug/L	10.0 U	20	20	19.1	20.7	95	104	66-149	8	
Acetone	ug/L	10.0 U	20	20	16.5	21.4	82	107	10-175	26	
Benzene	ug/L	1.0 U	20	20	21.5	19.3	107	97	67-119	11	
Bromodichloromethane	ug/L	1.0 U	20	20	20.5	18.6	103	93	67-126	10	
Bromoform	ug/L	1.0 U	20	20	15.3	15.2	76	76	43-114	1	
Bromomethane	ug/L	1.0 U	20	20	11.1	10.6	55	53	10-164	5	
Carbon disulfide	ug/L	1.0 U	20	20	19.4	18.5	97	93	37-135	5	
Carbon tetrachloride	ug/L	1.0 U	20	20	19.5	17.7	98	89	60-137	10	
Chlorobenzene	ug/L	1.0 U	20	20	20.9	19.8	105	99	68-119	6	
Chloroethane	ug/L	1.0 U	20	20	18.6	19.7	93	99	54-169	6	
Chloroform	ug/L	1.0 U	20	20	18.9	18.4	95	92	69-113	3	
Chloromethane	ug/L	1.0 U	20	20	18.5	19.0	92	95	43-159	3	
cis-1,2-Dichloroethene	ug/L	1.0 U	20	20	18.6	17.5	93	87	65-121	6	
cis-1,3-Dichloropropene	ug/L	1.0 U	20	20	19.0	17.3	95	87	61-120	9	
Dibromochloromethane	ug/L	1.0 U	20	20	18.0	17.4	90	87	56-121	4	
Ethylbenzene	ug/L	1.0 U	20	20	21.1	20.7	106	103	69-127	2	
m&p-Xylene	ug/L	2.0 U	40	40	43.7	41.3	109	103	70-129	6	
Methylene Chloride	ug/L	0.90J	20	20	20.5	17.2	98	81	49-144	18	
o-Xylene	ug/L	1.0 U	20	20	20.7	19.8	104	99	68-126	5	
Styrene	ug/L	1.0 U	20	20	19.9	18.6	100	93	65-120	7	
Tetrachloroethene	ug/L	0.51J	20	20	22.4	21.4	109	105	64-123	4	
Toluene	ug/L	1.0 U	20	20	21.1	20.1	105	100	70-130	5	
trans-1,2-Dichloroethene	ug/L	1.0 U	20	20	20.9	18.4	104	92	66-119	13	
trans-1,3-Dichloropropene	ug/L	1.0 U	20	20	18.8	17.7	94	88	52-117	6	
Trichloroethene	ug/L	1.0 U	20	20	21.4	19.5	107	98	63-125	9	
Vinyl chloride	ug/L	1.0 U	20	20	18.9	20.4	95	102	60-133	7	
1,2-Dichloroethane-d4 (S)	%.						98	93	80-120		
4-Bromofluorobenzene (S)	%.						102	97	78-122		
Dibromofluoromethane (S)	%.						103	97	80-120		
Toluene-d8 (S)	%.						99	99	80-120		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

QC Batch: 371493 Analysis Method: EPA 8015D
QC Batch Method: EPA 3510C Analysis Description: EPA 8015D TPH
Associated Lab Samples: 30335577001, 30335577002

METHOD BLANK: 1802691 Matrix: Water
Associated Lab Samples: 30335577001, 30335577002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH (C10-C28)	mg/L	ND	0.10	11/20/19 11:04	
o-Terphenyl (S)	%.	74	17-90	11/20/19 11:04	

LABORATORY CONTROL SAMPLE: 1802692

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH (C10-C28)	mg/L	1	0.83	83	43-107	
o-Terphenyl (S)	%.			79	17-90	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1802693 1802694

Parameter	Units	30335790001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH (C10-C28)	mg/L	0.13	0.98	0.98	0.66	0.84	53	72	26-112	24	
o-Terphenyl (S)	%.						58	77	17-90		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

QC Batch: 371492 Analysis Method: EPA 8081B
QC Batch Method: EPA 3510C Analysis Description: 8081A GCS Pesticides
Associated Lab Samples: 30335577001, 30335577002

METHOD BLANK: 1802688 Matrix: Water
Associated Lab Samples: 30335577001, 30335577002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.25	11/21/19 21:04	
Decachlorobiphenyl (S)	%.	78	10-129	11/21/19 21:04	
Tetrachloro-m-xylene (S)	%.	79	40-102	11/21/19 21:04	

LABORATORY CONTROL SAMPLE: 1802689

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlordane (Technical)	ug/L	2.5	1.9	77	47-112	
Decachlorobiphenyl (S)	%.			68	10-129	
Tetrachloro-m-xylene (S)	%.			76	40-102	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

QC Batch: 371491 Analysis Method: EPA 8082A
QC Batch Method: EPA 3510C Analysis Description: 8082A GCS PCB Mod
Associated Lab Samples: 30335577001, 30335577002

METHOD BLANK: 1802684 Matrix: Water
Associated Lab Samples: 30335577001, 30335577002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	ND	0.25	11/21/19 14:57	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1232 (Aroclor 1232)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1242 (Aroclor 1242)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1248 (Aroclor 1248)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1254 (Aroclor 1254)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1260 (Aroclor 1260)	ug/L	ND	0.25	11/21/19 14:57	CH
Decachlorobiphenyl (S)	%.	87	10-120	11/21/19 14:57	
Tetrachloro-m-xylene (S)	%.	82	36-108	11/21/19 14:57	

LABORATORY CONTROL SAMPLE: 1802685

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	2.5	2.1	83	45-121	
PCB-1260 (Aroclor 1260)	ug/L	2.5	2.3	91	50-121	CH
Decachlorobiphenyl (S)	%.			63	10-120	
Tetrachloro-m-xylene (S)	%.			79	36-108	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1802686 1802687

Parameter	Units	30335183004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
PCB-1016 (Aroclor 1016)	ug/L	ND	2.4	2.5	5.9	5.7	242	232	27-137	3	D3,MH
PCB-1260 (Aroclor 1260)	ug/L	ND	2.4	2.5	71.7	60.5	2940	2460	18-139	17	CH,D3,E, MH
Decachlorobiphenyl (S)	%.						108	109	10-120		CH
Tetrachloro-m-xylene (S)	%.						86	87	36-108		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA	Pace Analytical Services - Greensburg

BATCH QUALIFIERS

Batch: 371492

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1c	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
2c	The result for AR1260 is reported from the DB-CLP2 column due to a high response on the DB-CLP1 column. The higher of the two results is reported.
C2	Relative percent difference between results from each column was greater than 40%. The lower of the two results was reported.
CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
MH	Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PTTI (Former Tank Field Area)
Pace Project No.: 30335577

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30335577001	**PZ-13**	EPA 3510C	371493	EPA 8015D	371734
30335577002	**PZ-21**	EPA 3510C	371493	EPA 8015D	371734
30335577001	**PZ-13**	EPA 3510C	371492	EPA 8081B	371789
30335577002	**PZ-21**	EPA 3510C	371492	EPA 8081B	371789
30335577001	**PZ-13**	EPA 3510C	371491	EPA 8082A	371791
30335577002	**PZ-21**	EPA 3510C	371491	EPA 8082A	371791
30335577001	**PZ-13**	EPA 5030/8015B	371203		
30335577002	**PZ-21**	EPA 5030/8015B	371203		
30335577001	**PZ-13**	EPA 8260B	371926		
30335577002	**PZ-21**	EPA 8260B	371926		
30335577003	**Trip Blank -2**	EPA 8260B	371926		

WO# : 30335577

A 30335577

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONL

Company: GES, Inc.	Billing Information: gesinvoices@gesonline.com
Address: 301 Commerce Park Drive, Cranberry Township, PA 16066	
Report To: Erin Letrick	Email To: GreatLakesRegion@gesonline.com
Copy To:	Site Collection Info/Address: PTTI 30 Curry Ave.
Customer Project Name/Number: PTTI (Former Tank Field Area)(Unit)	State: PA County/City: Washington/Canonsburg Time Zone Collected: [ ] PT [ ] MT [ ] CT [✓] ET
Phone: 800-267-2549 Email:	Site/Facility ID #: 0705598/40/871 Org #1407
Collected By (print): Addison Sorun	Purchase Order #: Quote #: 11899-00
Collected By (signature): Addison Sorun	Turnaround Date Required: Standard 10-day TAT
Sample Disposal: [✓] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Compliance Monitoring? [ ] Yes [✓] No

DW PWS ID #:

DW Location Code:

Immediately Packed on Ice: [✓] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [✓] No

Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	TPH (GRO/DRO) (8015)	VOC 8260B	PCB (8082)	Chlordane (8081)	Analyses	Lab Profile/Line:
P2-13	GW	Grab			11-13-19	1330		9	X	X	X	X		001
P2-21	GW	Grab			11-13-19	1355		6	X	X	X	X		002
Trip Blank-2	GW	Grab			11-13-19	0000		2		X				003

Lab Sample Receipt Checklist:

Custody Seals Present/Intact: Y N NA
Custody Signatures Present: Y N NA
Collector Signature Present: Y N NA
Bottles Intact: Y N NA
Correct Bottles: Y N NA
Sufficient Volume: Y N NA
Samples Received on Ice: Y N NA
VOA - Headspace Acceptable: Y N NA
USDA Regulated Soils: Y N NA
Samples in Holding Time: Y N NA
Residual Chlorine Present: Y N NA
Cl Strips:
Sample pH Acceptable: Y N NA
pH Strips: 1010394
Sulfide Present: Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:

DJB 11/13

Customer Remarks / Special Conditions / Possible Hazards:
Please include results with PTTI (Former Tank Field Area) report

Type of Ice Used: Wet Blue Dry None

Packing Material Used: bubble bags

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: NA

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: 11
Cooler 1 Temp Upon Receipt: 3.2 oC
Cooler 1 Therm Corr. Factor: 0 oC
Cooler 1 Corrected Temp: 3.2 oC
Comments:

DJB 11/14/19

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 1

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Addison Sorun / GES	11-13-19 1515	Samples Receiving / GES	11-13-19 1515
Samples Receiving / GES		Bill Graham	11-14-19 1145
Bill Graham	11-14-19 1730		11/14/19 1730

MTJL LAB USE ONLY

Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Page 18 of 18

Appendix D – Building 20/25 Area Laboratory Analytical Reports, November 2019

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

November 25, 2019

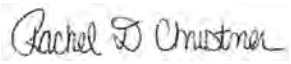
GES Great Lakes Region
Groundwater & Environmental Services, Inc.
301 Commerce Park Drive
Cranberry Twp, PA 16066

RE: Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Dear GES Lakes Region:
Enclosed are the analytical results for sample(s) received by the laboratory on November 14, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rachel Christner
rachel.christner@pacelabs.com
724-850-5611
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30335575001	**PZ-D14**	EPA 8015D	SEL	2	PASI-PA
		EPA 8081B	TAW	3	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335575002	**MW-12**	EPA 8015D	SEL	2	PASI-PA
		EPA 8081B	TAW	3	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335575003	**MW-11**	EPA 8015D	SEL	2	PASI-PA
		EPA 8081B	TAW	3	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335575004	**PZ-D7**	EPA 8015D	SEL	2	PASI-PA
		EPA 8081B	TAW	3	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335575005	**MW-9**	EPA 8015D	SEL	2	PASI-PA
		EPA 8081B	TAW	3	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335575006	**Equipment Blank-1**	EPA 8082A	CWB	9	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335575007	**PZ-D2**	EPA 8015D	SEL	2	PASI-PA
		EPA 8081B	TAW	3	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335575008	**MW-S1**	EPA 8015D	SEL	2	PASI-PA
		EPA 8081B	TAW	3	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30335575009	**MW-D1**	EPA 8015D	SEL	2	PASI-PA
		EPA 8081B	TAW	3	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335575010	**Field Blank-1**	EPA 8082A	CWB	9	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335575011	**MW-D4**	EPA 8015D	SEL	2	PASI-PA
		EPA 8081B	TAW	3	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: PZ-D14 **Lab ID: 30335575001** Collected: 11/12/19 10:10 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D Preparation Method: EPA 3510C							
TPH (C10-C28)	ND	mg/L	0.10	1	11/17/19 15:17	11/18/19 16:16		1c
Surrogates								
o-Terphenyl (S)	71	%.	17-90	1	11/17/19 15:17	11/18/19 16:16	84-15-1	
8081B Organochlorine Pesticide	Analytical Method: EPA 8081B Preparation Method: EPA 3510C							
Chlordane (Technical)	ND	ug/L	0.24	1	11/15/19 11:00	11/18/19 21:10	57-74-9	1c
Surrogates								
Tetrachloro-m-xylene (S)	70	%.	40-102	1	11/15/19 11:00	11/18/19 21:10	877-09-8	
Decachlorobiphenyl (S)	63	%.	10-129	1	11/15/19 11:00	11/18/19 21:10	2051-24-3	
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.24	1	11/15/19 11:00	11/19/19 13:57	12674-11-2	1c
PCB-1221 (Aroclor 1221)	ND	ug/L	0.24	1	11/15/19 11:00	11/19/19 13:57	11104-28-2	1c
PCB-1232 (Aroclor 1232)	ND	ug/L	0.24	1	11/15/19 11:00	11/19/19 13:57	11141-16-5	1c
PCB-1242 (Aroclor 1242)	ND	ug/L	0.24	1	11/15/19 11:00	11/19/19 13:57	53469-21-9	1c
PCB-1248 (Aroclor 1248)	ND	ug/L	0.24	1	11/15/19 11:00	11/19/19 13:57	12672-29-6	1c
PCB-1254 (Aroclor 1254)	ND	ug/L	0.24	1	11/15/19 11:00	11/19/19 13:57	11097-69-1	1c
PCB-1260 (Aroclor 1260)	ND	ug/L	0.24	1	11/15/19 11:00	11/19/19 13:57	11096-82-5	1c
Surrogates								
Tetrachloro-m-xylene (S)	73	%.	36-108	1	11/15/19 11:00	11/19/19 13:57	877-09-8	
Decachlorobiphenyl (S)	67	%.	10-120	1	11/15/19 11:00	11/19/19 13:57	2051-24-3	
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/15/19 21:16		
Surrogates								
4-Bromofluorobenzene (S)	96	%.	80-120	1		11/15/19 21:16	460-00-4	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 13:31	67-64-1	
Benzene	ND	ug/L	1.0	1		11/20/19 13:31	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 13:31	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 13:31	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 13:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 13:31	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 13:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 13:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/20/19 13:31	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 13:31	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 13:31	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 13:31	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 13:31	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 13:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 13:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 13:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 13:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 13:31	156-60-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: PZ-D14 **Lab ID: 30335575001** Collected: 11/12/19 10:10 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 13:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 13:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 13:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 13:31	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 13:31	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		11/20/19 13:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 13:31	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 13:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 13:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/20/19 13:31	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 13:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 13:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 13:31	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/20/19 13:31	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/20/19 13:31	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 13:31	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/20/19 13:31	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%.	78-122	1		11/20/19 13:31	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%.	80-120	1		11/20/19 13:31	17060-07-0	
Toluene-d8 (S)	96	%.	80-120	1		11/20/19 13:31	2037-26-5	
Dibromofluoromethane (S)	98	%.	80-120	1		11/20/19 13:31	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: MW-12 **Lab ID: 30335575002** Collected: 11/12/19 11:10 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D Preparation Method: EPA 3510C							
TPH (C10-C28)	ND	mg/L	0.10	1	11/17/19 15:17	11/18/19 16:29		1c
Surrogates								
o-Terphenyl (S)	68	%.	17-90	1	11/17/19 15:17	11/18/19 16:29	84-15-1	
8081B Organochlorine Pesticide	Analytical Method: EPA 8081B Preparation Method: EPA 3510C							
Chlordane (Technical)	ND	ug/L	0.25	1	11/15/19 11:00	11/18/19 21:20	57-74-9	1c
Surrogates								
Tetrachloro-m-xylene (S)	68	%.	40-102	1	11/15/19 11:00	11/18/19 21:20	877-09-8	
Decachlorobiphenyl (S)	65	%.	10-129	1	11/15/19 11:00	11/18/19 21:20	2051-24-3	
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:05	12674-11-2	1c
PCB-1221 (Aroclor 1221)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:05	11104-28-2	1c
PCB-1232 (Aroclor 1232)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:05	11141-16-5	1c
PCB-1242 (Aroclor 1242)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:05	53469-21-9	1c
PCB-1248 (Aroclor 1248)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:05	12672-29-6	1c
PCB-1254 (Aroclor 1254)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:05	11097-69-1	1c
PCB-1260 (Aroclor 1260)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:05	11096-82-5	1c
Surrogates								
Tetrachloro-m-xylene (S)	72	%.	36-108	1	11/15/19 11:00	11/19/19 14:05	877-09-8	
Decachlorobiphenyl (S)	67	%.	10-120	1	11/15/19 11:00	11/19/19 14:05	2051-24-3	
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/15/19 21:34		
Surrogates								
4-Bromofluorobenzene (S)	94	%.	80-120	1		11/15/19 21:34	460-00-4	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 15:10	67-64-1	
Benzene	ND	ug/L	1.0	1		11/20/19 15:10	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 15:10	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 15:10	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 15:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 15:10	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 15:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 15:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/20/19 15:10	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 15:10	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 15:10	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 15:10	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 15:10	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 15:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 15:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 15:10	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 15:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 15:10	156-60-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: MW-12 **Lab ID: 30335575002** Collected: 11/12/19 11:10 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 15:10	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 15:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 15:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 15:10	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 15:10	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		11/20/19 15:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 15:10	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 15:10	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 15:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/20/19 15:10	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 15:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 15:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 15:10	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/20/19 15:10	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/20/19 15:10	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 15:10	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/20/19 15:10	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	102	%.	78-122	1		11/20/19 15:10	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%.	80-120	1		11/20/19 15:10	17060-07-0	
Toluene-d8 (S)	96	%.	80-120	1		11/20/19 15:10	2037-26-5	
Dibromofluoromethane (S)	97	%.	80-120	1		11/20/19 15:10	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: MW-11 **Lab ID: 30335575003** Collected: 11/12/19 12:05 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D Preparation Method: EPA 3510C							
TPH (C10-C28)	**0.11**	mg/L	0.10	1	11/17/19 15:17	11/18/19 16:36		1c
Surrogates								
o-Terphenyl (S)	69	%.	17-90	1	11/17/19 15:17	11/18/19 16:36	84-15-1	
8081B Organochlorine Pesticide	Analytical Method: EPA 8081B Preparation Method: EPA 3510C							
Chlordane (Technical)	ND	ug/L	0.25	1	11/15/19 11:00	11/18/19 21:39	57-74-9	1c
Surrogates								
Tetrachloro-m-xylene (S)	67	%.	40-102	1	11/15/19 11:00	11/18/19 21:39	877-09-8	
Decachlorobiphenyl (S)	72	%.	10-129	1	11/15/19 11:00	11/18/19 21:39	2051-24-3	
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.49	2	11/15/19 11:00	11/19/19 14:14	12674-11-2	1c
PCB-1221 (Aroclor 1221)	ND	ug/L	0.49	2	11/15/19 11:00	11/19/19 14:14	11104-28-2	1c
PCB-1232 (Aroclor 1232)	ND	ug/L	0.49	2	11/15/19 11:00	11/19/19 14:14	11141-16-5	1c
PCB-1242 (Aroclor 1242)	ND	ug/L	0.49	2	11/15/19 11:00	11/19/19 14:14	53469-21-9	1c
PCB-1248 (Aroclor 1248)	ND	ug/L	0.49	2	11/15/19 11:00	11/19/19 14:14	12672-29-6	1c
PCB-1254 (Aroclor 1254)	ND	ug/L	0.49	2	11/15/19 11:00	11/19/19 14:14	11097-69-1	1c
PCB-1260 (Aroclor 1260)	**3.1**	ug/L	0.49	2	11/15/19 11:00	11/19/19 14:14	11096-82-5	1c
Surrogates								
Tetrachloro-m-xylene (S)	72	%.	36-108	2	11/15/19 11:00	11/19/19 14:14	877-09-8	
Decachlorobiphenyl (S)	75	%.	10-120	2	11/15/19 11:00	11/19/19 14:14	2051-24-3	
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/15/19 21:53		
Surrogates								
4-Bromofluorobenzene (S)	90	%.	80-120	1		11/15/19 21:53	460-00-4	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 15:35	67-64-1	
Benzene	ND	ug/L	1.0	1		11/20/19 15:35	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 15:35	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 15:35	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 15:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 15:35	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 15:35	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 15:35	56-23-5	
Chlorobenzene	**1.6**	ug/L	1.0	1		11/20/19 15:35	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 15:35	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 15:35	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 15:35	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 15:35	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 15:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 15:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 15:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 15:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 15:35	156-60-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: MW-11 **Lab ID: 30335575003** Collected: 11/12/19 12:05 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 15:35	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 15:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 15:35	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 15:35	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 15:35	591-78-6	
Methylene Chloride	**1.0**	ug/L	1.0	1		11/20/19 15:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 15:35	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 15:35	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 15:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/20/19 15:35	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 15:35	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 15:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 15:35	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/20/19 15:35	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/20/19 15:35	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 15:35	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/20/19 15:35	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%.	78-122	1		11/20/19 15:35	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%.	80-120	1		11/20/19 15:35	17060-07-0	
Toluene-d8 (S)	96	%.	80-120	1		11/20/19 15:35	2037-26-5	
Dibromofluoromethane (S)	103	%.	80-120	1		11/20/19 15:35	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: PZ-D7 **Lab ID: 30335575004** Collected: 11/12/19 12:45 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D Preparation Method: EPA 3510C							
TPH (C10-C28)	**0.18**	mg/L	0.10	1	11/17/19 15:17	11/18/19 16:48		1c
Surrogates								
o-Terphenyl (S)	54	%.	17-90	1	11/17/19 15:17	11/18/19 16:48	84-15-1	
8081B Organochlorine Pesticide	Analytical Method: EPA 8081B Preparation Method: EPA 3510C							
Chlordane (Technical)	ND	ug/L	0.25	1	11/15/19 11:00	11/18/19 21:49	57-74-9	1c
Surrogates								
Tetrachloro-m-xylene (S)	56	%.	40-102	1	11/15/19 11:00	11/18/19 21:49	877-09-8	
Decachlorobiphenyl (S)	61	%.	10-129	1	11/15/19 11:00	11/18/19 21:49	2051-24-3	
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:31	12674-11-2	1c
PCB-1221 (Aroclor 1221)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:31	11104-28-2	1c
PCB-1232 (Aroclor 1232)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:31	11141-16-5	1c
PCB-1242 (Aroclor 1242)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:31	53469-21-9	1c
PCB-1248 (Aroclor 1248)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:31	12672-29-6	1c
PCB-1254 (Aroclor 1254)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:31	11097-69-1	1c
PCB-1260 (Aroclor 1260)	**0.44**	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:31	11096-82-5	1c,C2
Surrogates								
Tetrachloro-m-xylene (S)	59	%.	36-108	1	11/15/19 11:00	11/19/19 14:31	877-09-8	
Decachlorobiphenyl (S)	64	%.	10-120	1	11/15/19 11:00	11/19/19 14:31	2051-24-3	
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/15/19 22:12		
Surrogates								
4-Bromofluorobenzene (S)	95	%.	80-120	1		11/15/19 22:12	460-00-4	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 16:00	67-64-1	
Benzene	ND	ug/L	1.0	1		11/20/19 16:00	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 16:00	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 16:00	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 16:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 16:00	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 16:00	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 16:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/20/19 16:00	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 16:00	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 16:00	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 16:00	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 16:00	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 16:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 16:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 16:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 16:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 16:00	156-60-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: PZ-D7 **Lab ID: 30335575004** Collected: 11/12/19 12:45 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 16:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 16:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 16:00	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 16:00	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 16:00	591-78-6	
Methylene Chloride	**1.1**	ug/L	1.0	1		11/20/19 16:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 16:00	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 16:00	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 16:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/20/19 16:00	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 16:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 16:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 16:00	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/20/19 16:00	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/20/19 16:00	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 16:00	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/20/19 16:00	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%.	78-122	1		11/20/19 16:00	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%.	80-120	1		11/20/19 16:00	17060-07-0	
Toluene-d8 (S)	95	%.	80-120	1		11/20/19 16:00	2037-26-5	
Dibromofluoromethane (S)	101	%.	80-120	1		11/20/19 16:00	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: MW-9 **Lab ID: 30335575005** Collected: 11/12/19 13:35 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D Preparation Method: EPA 3510C							
TPH (C10-C28)	ND	mg/L	0.11	1	11/17/19 15:17	11/18/19 16:54		1c
Surrogates								
o-Terphenyl (S)	51	%.	17-90	1	11/17/19 15:17	11/18/19 16:54	84-15-1	
8081B Organochlorine Pesticide	Analytical Method: EPA 8081B Preparation Method: EPA 3510C							
Chlordane (Technical)	ND	ug/L	0.29	1	11/15/19 11:00	11/18/19 22:09	57-74-9	1c
Surrogates								
Tetrachloro-m-xylene (S)	62	%.	40-102	1	11/15/19 11:00	11/18/19 22:09	877-09-8	
Decachlorobiphenyl (S)	77	%.	10-129	1	11/15/19 11:00	11/18/19 22:09	2051-24-3	
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.29	1	11/15/19 11:00	11/19/19 14:39	12674-11-2	1c
PCB-1221 (Aroclor 1221)	ND	ug/L	0.29	1	11/15/19 11:00	11/19/19 14:39	11104-28-2	1c
PCB-1232 (Aroclor 1232)	ND	ug/L	0.29	1	11/15/19 11:00	11/19/19 14:39	11141-16-5	1c
PCB-1242 (Aroclor 1242)	ND	ug/L	0.29	1	11/15/19 11:00	11/19/19 14:39	53469-21-9	1c
PCB-1248 (Aroclor 1248)	ND	ug/L	0.29	1	11/15/19 11:00	11/19/19 14:39	12672-29-6	1c
PCB-1254 (Aroclor 1254)	ND	ug/L	0.29	1	11/15/19 11:00	11/19/19 14:39	11097-69-1	1c
PCB-1260 (Aroclor 1260)	ND	ug/L	0.29	1	11/15/19 11:00	11/19/19 14:39	11096-82-5	1c
Surrogates								
Tetrachloro-m-xylene (S)	68	%.	36-108	1	11/15/19 11:00	11/19/19 14:39	877-09-8	
Decachlorobiphenyl (S)	82	%.	10-120	1	11/15/19 11:00	11/19/19 14:39	2051-24-3	
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/15/19 22:31		
Surrogates								
4-Bromofluorobenzene (S)	94	%.	80-120	1		11/15/19 22:31	460-00-4	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 16:25	67-64-1	
Benzene	ND	ug/L	1.0	1		11/20/19 16:25	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 16:25	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 16:25	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 16:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 16:25	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 16:25	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 16:25	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/20/19 16:25	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 16:25	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 16:25	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 16:25	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 16:25	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 16:25	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 16:25	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 16:25	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 16:25	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 16:25	156-60-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: MW-9 **Lab ID: 30335575005** Collected: 11/12/19 13:35 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 16:25	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 16:25	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 16:25	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 16:25	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 16:25	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		11/20/19 16:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 16:25	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 16:25	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 16:25	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/20/19 16:25	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 16:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 16:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 16:25	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/20/19 16:25	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/20/19 16:25	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 16:25	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/20/19 16:25	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	102	%.	78-122	1		11/20/19 16:25	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%.	80-120	1		11/20/19 16:25	17060-07-0	
Toluene-d8 (S)	94	%.	80-120	1		11/20/19 16:25	2037-26-5	
Dibromofluoromethane (S)	101	%.	80-120	1		11/20/19 16:25	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: Equipment Blank-1 **Lab ID: 30335575006** Collected: 11/12/19 13:45 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:48	12674-11-2	1c
PCB-1221 (Aroclor 1221)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:48	11104-28-2	1c
PCB-1232 (Aroclor 1232)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:48	11141-16-5	1c
PCB-1242 (Aroclor 1242)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:48	53469-21-9	1c
PCB-1248 (Aroclor 1248)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:48	12672-29-6	1c
PCB-1254 (Aroclor 1254)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:48	11097-69-1	1c
PCB-1260 (Aroclor 1260)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 14:48	11096-82-5	1c
Surrogates								
Tetrachloro-m-xylene (S)	67	%.	36-108	1	11/15/19 11:00	11/19/19 14:48	877-09-8	
Decachlorobiphenyl (S)	28	%.	10-120	1	11/15/19 11:00	11/19/19 14:48	2051-24-3	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 14:21	67-64-1	
Benzene	ND	ug/L	1.0	1		11/20/19 14:21	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 14:21	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 14:21	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 14:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 14:21	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 14:21	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 14:21	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/20/19 14:21	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 14:21	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 14:21	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 14:21	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 14:21	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 14:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 14:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 14:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 14:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 14:21	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 14:21	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 14:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 14:21	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 14:21	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 14:21	591-78-6	
Methylene Chloride	**1.0**	ug/L	1.0	1		11/20/19 14:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 14:21	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 14:21	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 14:21	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/20/19 14:21	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 14:21	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 14:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 14:21	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/20/19 14:21	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/20/19 14:21	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 14:21	179601-23-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: Equipment Blank-1 **Lab ID: 30335575006** Collected: 11/12/19 13:45 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
o-Xylene	ND	ug/L	1.0	1		11/20/19 14:21	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%.	78-122	1		11/20/19 14:21	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%.	80-120	1		11/20/19 14:21	17060-07-0	
Toluene-d8 (S)	95	%.	80-120	1		11/20/19 14:21	2037-26-5	
Dibromofluoromethane (S)	99	%.	80-120	1		11/20/19 14:21	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: PZ-D2 **Lab ID: 30335575007** Collected: 11/12/19 14:05 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D Preparation Method: EPA 3510C							
TPH (C10-C28)	ND	mg/L	0.098	1	11/17/19 15:17	11/18/19 17:07		1c
Surrogates								
o-Terphenyl (S)	61	%.	17-90	1	11/17/19 15:17	11/18/19 17:07	84-15-1	
8081B Organochlorine Pesticide	Analytical Method: EPA 8081B Preparation Method: EPA 3510C							
Chlordane (Technical)	ND	ug/L	0.26	1	11/15/19 11:00	11/18/19 22:18	57-74-9	1c
Surrogates								
Tetrachloro-m-xylene (S)	70	%.	40-102	1	11/15/19 11:00	11/18/19 22:18	877-09-8	
Decachlorobiphenyl (S)	68	%.	10-129	1	11/15/19 11:00	11/18/19 22:18	2051-24-3	
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 15:05	12674-11-2	1c
PCB-1221 (Aroclor 1221)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 15:05	11104-28-2	1c
PCB-1232 (Aroclor 1232)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 15:05	11141-16-5	1c
PCB-1242 (Aroclor 1242)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 15:05	53469-21-9	1c
PCB-1248 (Aroclor 1248)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 15:05	12672-29-6	1c
PCB-1254 (Aroclor 1254)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 15:05	11097-69-1	1c
PCB-1260 (Aroclor 1260)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 15:05	11096-82-5	1c
Surrogates								
Tetrachloro-m-xylene (S)	71	%.	36-108	1	11/15/19 11:00	11/19/19 15:05	877-09-8	
Decachlorobiphenyl (S)	71	%.	10-120	1	11/15/19 11:00	11/19/19 15:05	2051-24-3	
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/15/19 22:50		
Surrogates								
4-Bromofluorobenzene (S)	95	%.	80-120	1		11/15/19 22:50	460-00-4	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 14:46	67-64-1	
Benzene	ND	ug/L	1.0	1		11/20/19 14:46	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 14:46	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 14:46	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 14:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 14:46	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 14:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 14:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/20/19 14:46	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 14:46	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 14:46	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 14:46	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 14:46	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 14:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 14:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 14:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 14:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 14:46	156-60-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: PZ-D2 **Lab ID: 30335575007** Collected: 11/12/19 14:05 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 14:46	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 14:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 14:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 14:46	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 14:46	591-78-6	
Methylene Chloride	**1.0**	ug/L	1.0	1		11/20/19 14:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 14:46	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 14:46	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 14:46	79-34-5	
Tetrachloroethene	**4.9**	ug/L	1.0	1		11/20/19 14:46	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 14:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 14:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 14:46	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/20/19 14:46	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/20/19 14:46	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 14:46	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/20/19 14:46	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	102	%.	78-122	1		11/20/19 14:46	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%.	80-120	1		11/20/19 14:46	17060-07-0	
Toluene-d8 (S)	95	%.	80-120	1		11/20/19 14:46	2037-26-5	
Dibromofluoromethane (S)	98	%.	80-120	1		11/20/19 14:46	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: MW-S1 **Lab ID: 30335575008** Collected: 11/12/19 14:25 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D Preparation Method: EPA 3510C							
TPH (C10-C28)	**0.13**	mg/L	0.10	1	11/17/19 15:17	11/18/19 17:14		1c
Surrogates								
o-Terphenyl (S)	58	%.	17-90	1	11/17/19 15:17	11/18/19 17:14	84-15-1	
8081B Organochlorine Pesticide	Analytical Method: EPA 8081B Preparation Method: EPA 3510C							
Chlordane (Technical)	ND	ug/L	0.26	1	11/15/19 11:00	11/18/19 22:38	57-74-9	1c
Surrogates								
Tetrachloro-m-xylene (S)	66	%.	40-102	1	11/15/19 11:00	11/18/19 22:38	877-09-8	
Decachlorobiphenyl (S)	53	%.	10-129	1	11/15/19 11:00	11/18/19 22:38	2051-24-3	
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.51	2	11/15/19 11:00	11/19/19 15:14	12674-11-2	1c
PCB-1221 (Aroclor 1221)	ND	ug/L	0.51	2	11/15/19 11:00	11/19/19 15:14	11104-28-2	1c
PCB-1232 (Aroclor 1232)	ND	ug/L	0.51	2	11/15/19 11:00	11/19/19 15:14	11141-16-5	1c
PCB-1242 (Aroclor 1242)	ND	ug/L	0.51	2	11/15/19 11:00	11/19/19 15:14	53469-21-9	1c
PCB-1248 (Aroclor 1248)	ND	ug/L	0.51	2	11/15/19 11:00	11/19/19 15:14	12672-29-6	1c
PCB-1254 (Aroclor 1254)	ND	ug/L	0.51	2	11/15/19 11:00	11/19/19 15:14	11097-69-1	1c
PCB-1260 (Aroclor 1260)	**2.8**	ug/L	0.51	2	11/15/19 11:00	11/19/19 15:14	11096-82-5	1c
Surrogates								
Tetrachloro-m-xylene (S)	69	%.	36-108	2	11/15/19 11:00	11/19/19 15:14	877-09-8	
Decachlorobiphenyl (S)	57	%.	10-120	2	11/15/19 11:00	11/19/19 15:14	2051-24-3	
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/15/19 23:09		
Surrogates								
4-Bromofluorobenzene (S)	95	%.	80-120	1		11/15/19 23:09	460-00-4	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 16:49	67-64-1	
Benzene	ND	ug/L	1.0	1		11/20/19 16:49	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 16:49	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 16:49	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 16:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 16:49	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 16:49	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 16:49	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/20/19 16:49	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 16:49	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 16:49	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 16:49	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 16:49	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 16:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 16:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 16:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 16:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 16:49	156-60-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: MW-S1 **Lab ID: 30335575008** Collected: 11/12/19 14:25 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 16:49	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 16:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 16:49	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 16:49	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 16:49	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		11/20/19 16:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 16:49	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 16:49	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 16:49	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/20/19 16:49	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 16:49	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 16:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 16:49	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/20/19 16:49	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/20/19 16:49	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 16:49	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/20/19 16:49	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%.	78-122	1		11/20/19 16:49	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%.	80-120	1		11/20/19 16:49	17060-07-0	
Toluene-d8 (S)	96	%.	80-120	1		11/20/19 16:49	2037-26-5	
Dibromofluoromethane (S)	102	%.	80-120	1		11/20/19 16:49	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: MW-D1 **Lab ID: 30335575009** Collected: 11/12/19 14:45 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D Preparation Method: EPA 3510C							
TPH (C10-C28)	**0.12**	mg/L	0.10	1	11/17/19 15:17	11/18/19 17:26		1c
Surrogates								
o-Terphenyl (S)	58	%.	17-90	1	11/17/19 15:17	11/18/19 17:26	84-15-1	
8081B Organochlorine Pesticide	Analytical Method: EPA 8081B Preparation Method: EPA 3510C							
Chlordane (Technical)	**0.35**	ug/L	0.24	1	11/15/19 11:00	11/18/19 22:47	57-74-9	1c
Surrogates								
Tetrachloro-m-xylene (S)	71	%.	40-102	1	11/15/19 11:00	11/18/19 22:47	877-09-8	
Decachlorobiphenyl (S)	65	%.	10-129	1	11/15/19 11:00	11/18/19 22:47	2051-24-3	
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.24	1	11/15/19 11:00	11/19/19 15:31	12674-11-2	1c
PCB-1221 (Aroclor 1221)	ND	ug/L	0.24	1	11/15/19 11:00	11/19/19 15:31	11104-28-2	1c
PCB-1232 (Aroclor 1232)	ND	ug/L	0.24	1	11/15/19 11:00	11/19/19 15:31	11141-16-5	1c
PCB-1242 (Aroclor 1242)	ND	ug/L	0.24	1	11/15/19 11:00	11/19/19 15:31	53469-21-9	1c
PCB-1248 (Aroclor 1248)	ND	ug/L	0.24	1	11/15/19 11:00	11/19/19 15:31	12672-29-6	1c
PCB-1254 (Aroclor 1254)	ND	ug/L	0.24	1	11/15/19 11:00	11/19/19 15:31	11097-69-1	1c
PCB-1260 (Aroclor 1260)	**0.31**	ug/L	0.24	1	11/15/19 11:00	11/19/19 15:31	11096-82-5	1c
Surrogates								
Tetrachloro-m-xylene (S)	72	%.	36-108	1	11/15/19 11:00	11/19/19 15:31	877-09-8	
Decachlorobiphenyl (S)	70	%.	10-120	1	11/15/19 11:00	11/19/19 15:31	2051-24-3	
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/15/19 23:47		
Surrogates								
4-Bromofluorobenzene (S)	95	%.	80-120	1		11/15/19 23:47	460-00-4	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 17:14	67-64-1	
Benzene	ND	ug/L	1.0	1		11/20/19 17:14	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 17:14	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 17:14	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 17:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 17:14	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 17:14	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 17:14	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/20/19 17:14	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 17:14	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 17:14	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 17:14	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 17:14	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 17:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 17:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 17:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 17:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 17:14	156-60-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
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ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: MW-D1 **Lab ID: 30335575009** Collected: 11/12/19 14:45 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 17:14	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 17:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 17:14	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 17:14	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 17:14	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		11/20/19 17:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 17:14	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 17:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 17:14	79-34-5	
Tetrachloroethene	**4.8**	ug/L	1.0	1		11/20/19 17:14	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 17:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 17:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 17:14	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/20/19 17:14	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/20/19 17:14	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 17:14	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/20/19 17:14	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	98	%.	78-122	1		11/20/19 17:14	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%.	80-120	1		11/20/19 17:14	17060-07-0	
Toluene-d8 (S)	96	%.	80-120	1		11/20/19 17:14	2037-26-5	
Dibromofluoromethane (S)	97	%.	80-120	1		11/20/19 17:14	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: Field Blank-1 **Lab ID: 30335575010** Collected: 11/12/19 14:55 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 15:39	12674-11-2	1c
PCB-1221 (Aroclor 1221)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 15:39	11104-28-2	1c
PCB-1232 (Aroclor 1232)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 15:39	11141-16-5	1c
PCB-1242 (Aroclor 1242)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 15:39	53469-21-9	1c
PCB-1248 (Aroclor 1248)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 15:39	12672-29-6	1c
PCB-1254 (Aroclor 1254)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 15:39	11097-69-1	1c
PCB-1260 (Aroclor 1260)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 15:39	11096-82-5	1c
Surrogates								
Tetrachloro-m-xylene (S)	77	%.	36-108	1	11/15/19 11:00	11/19/19 15:39	877-09-8	
Decachlorobiphenyl (S)	57	%.	10-120	1	11/15/19 11:00	11/19/19 15:39	2051-24-3	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 13:56	67-64-1	
Benzene	ND	ug/L	1.0	1		11/20/19 13:56	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 13:56	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 13:56	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 13:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 13:56	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 13:56	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 13:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/20/19 13:56	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 13:56	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 13:56	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 13:56	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 13:56	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 13:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 13:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 13:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 13:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 13:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 13:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 13:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 13:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 13:56	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 13:56	591-78-6	
Methylene Chloride	**1.5**	ug/L	1.0	1		11/20/19 13:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 13:56	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 13:56	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 13:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/20/19 13:56	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 13:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 13:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 13:56	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/20/19 13:56	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/20/19 13:56	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 13:56	179601-23-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: Field Blank-1 **Lab ID: 30335575010** Collected: 11/12/19 14:55 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
o-Xylene	ND	ug/L	1.0	1		11/20/19 13:56	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	101	%.	78-122	1		11/20/19 13:56	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%.	80-120	1		11/20/19 13:56	17060-07-0	
Toluene-d8 (S)	95	%.	80-120	1		11/20/19 13:56	2037-26-5	
Dibromofluoromethane (S)	100	%.	80-120	1		11/20/19 13:56	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: MW-D4 **Lab ID: 30335575011** Collected: 11/13/19 10:20 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D	Preparation Method: EPA 3510C						
TPH (C10-C28)	**1.7**	mg/L	0.10	1	11/19/19 11:41	11/20/19 13:18		
Surrogates								
o-Terphenyl (S)	59	%.	17-90	1	11/19/19 11:41	11/20/19 13:18	84-15-1	
8081B Organochlorine Pesticide	Analytical Method: EPA 8081B	Preparation Method: EPA 3510C						
Chlordane (Technical)	ND	ug/L	0.24	1	11/19/19 13:34	11/21/19 19:56	57-74-9	1c
Surrogates								
Tetrachloro-m-xylene (S)	70	%.	40-102	1	11/19/19 13:34	11/21/19 19:56	877-09-8	
Decachlorobiphenyl (S)	50	%.	10-129	1	11/19/19 13:34	11/21/19 19:56	2051-24-3	
8082A GCS PCB	Analytical Method: EPA 8082A	Preparation Method: EPA 3510C						
PCB-1016 (Aroclor 1016)	ND	ug/L	2.4	10	11/19/19 13:34	11/22/19 12:49	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	2.4	10	11/19/19 13:34	11/22/19 12:49	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	2.4	10	11/19/19 13:34	11/22/19 12:49	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	2.4	10	11/19/19 13:34	11/22/19 12:49	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	2.4	10	11/19/19 13:34	11/22/19 12:49	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	2.4	10	11/19/19 13:34	11/22/19 12:49	11097-69-1	
PCB-1260 (Aroclor 1260)	**20.1**	ug/L	2.4	10	11/19/19 13:34	11/22/19 12:49	11096-82-5	
Surrogates								
Tetrachloro-m-xylene (S)	92	%.	36-108	10	11/19/19 13:34	11/22/19 12:49	877-09-8	
Decachlorobiphenyl (S)	64	%.	10-120	10	11/19/19 13:34	11/22/19 12:49	2051-24-3	
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	10000	50		11/16/19 00:05		
Surrogates								
4-Bromofluorobenzene (S)	61	%.	80-120	50		11/16/19 00:05	460-00-4	S2,SR
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 20:44	67-64-1	
Benzene	**12.2**	ug/L	1.0	1		11/20/19 20:44	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 20:44	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 20:44	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 20:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 20:44	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 20:44	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 20:44	56-23-5	
Chlorobenzene	**813**	ug/L	20.0	20		11/20/19 21:09	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 20:44	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 20:44	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 20:44	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 20:44	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 20:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 20:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 20:44	75-35-4	
cis-1,2-Dichloroethene	**15.7**	ug/L	1.0	1		11/20/19 20:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 20:44	156-60-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Sample: MW-D4 **Lab ID: 30335575011** Collected: 11/13/19 10:20 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 20:44	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 20:44	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 20:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 20:44	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 20:44	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		11/20/19 20:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 20:44	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 20:44	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 20:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/20/19 20:44	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 20:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 20:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 20:44	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/20/19 20:44	79-01-6	
Vinyl chloride	**2.8**	ug/L	1.0	1		11/20/19 20:44	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 20:44	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/20/19 20:44	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100	%.	78-122	1		11/20/19 20:44	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%.	80-120	1		11/20/19 20:44	17060-07-0	
Toluene-d8 (S)	98	%.	80-120	1		11/20/19 20:44	2037-26-5	
Dibromofluoromethane (S)	103	%.	80-120	1		11/20/19 20:44	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

QC Batch: 371203 Analysis Method: EPA 5030/8015B
QC Batch Method: EPA 5030/8015B Analysis Description: Gasoline Range Organics
Associated Lab Samples: 30335575001, 30335575002, 30335575003, 30335575004, 30335575005, 30335575007, 30335575008, 30335575009, 30335575011

METHOD BLANK: 1801114 Matrix: Water
Associated Lab Samples: 30335575001, 30335575002, 30335575003, 30335575004, 30335575005, 30335575007, 30335575008, 30335575009, 30335575011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH (C06-C10)	ug/L	ND	200	11/15/19 18:26	
4-Bromofluorobenzene (S)	%.	95	80-120	11/15/19 18:26	

LABORATORY CONTROL SAMPLE: 1801115

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH (C06-C10)	ug/L	1000	791	79	66-129	
4-Bromofluorobenzene (S)	%.			97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1801116 1801117

Parameter	Units	30335167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH (C06-C10)	ug/L	ND	1000	1000	853	899	84	89	51-126	5	
4-Bromofluorobenzene (S)	%.						99	100	80-120		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

QC Batch: 371918 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV
Associated Lab Samples: 30335575001, 30335575002, 30335575003, 30335575004, 30335575005, 30335575006, 30335575007, 30335575008, 30335575009, 30335575010

METHOD BLANK: 1804482 Matrix: Water
Associated Lab Samples: 30335575001, 30335575002, 30335575003, 30335575004, 30335575005, 30335575006, 30335575007, 30335575008, 30335575009, 30335575010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	11/20/19 13:06	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/20/19 13:06	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/20/19 13:06	
1,1-Dichloroethane	ug/L	ND	1.0	11/20/19 13:06	
1,1-Dichloroethene	ug/L	ND	1.0	11/20/19 13:06	
1,2-Dichloroethane	ug/L	ND	1.0	11/20/19 13:06	
1,2-Dichloropropane	ug/L	ND	1.0	11/20/19 13:06	
2-Butanone (MEK)	ug/L	ND	10.0	11/20/19 13:06	
2-Hexanone	ug/L	ND	10.0	11/20/19 13:06	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	11/20/19 13:06	
Acetone	ug/L	ND	10.0	11/20/19 13:06	
Benzene	ug/L	ND	1.0	11/20/19 13:06	
Bromodichloromethane	ug/L	ND	1.0	11/20/19 13:06	
Bromoform	ug/L	ND	1.0	11/20/19 13:06	
Bromomethane	ug/L	ND	1.0	11/20/19 13:06	
Carbon disulfide	ug/L	ND	1.0	11/20/19 13:06	
Carbon tetrachloride	ug/L	ND	1.0	11/20/19 13:06	
Chlorobenzene	ug/L	ND	1.0	11/20/19 13:06	
Chloroethane	ug/L	ND	1.0	11/20/19 13:06	
Chloroform	ug/L	ND	1.0	11/20/19 13:06	
Chloromethane	ug/L	ND	1.0	11/20/19 13:06	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/20/19 13:06	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/20/19 13:06	
Dibromochloromethane	ug/L	ND	1.0	11/20/19 13:06	
Ethylbenzene	ug/L	ND	1.0	11/20/19 13:06	
m&p-Xylene	ug/L	ND	2.0	11/20/19 13:06	
Methylene Chloride	ug/L	ND	1.0	11/20/19 13:06	
o-Xylene	ug/L	ND	1.0	11/20/19 13:06	
Styrene	ug/L	ND	1.0	11/20/19 13:06	
Tetrachloroethene	ug/L	ND	1.0	11/20/19 13:06	
Toluene	ug/L	ND	1.0	11/20/19 13:06	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/20/19 13:06	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/20/19 13:06	
Trichloroethene	ug/L	ND	1.0	11/20/19 13:06	
Vinyl chloride	ug/L	ND	1.0	11/20/19 13:06	
1,2-Dichloroethane-d4 (S)	%.	98	80-120	11/20/19 13:06	
4-Bromofluorobenzene (S)	%.	100	78-122	11/20/19 13:06	
Dibromofluoromethane (S)	%.	101	80-120	11/20/19 13:06	
Toluene-d8 (S)	%.	96	80-120	11/20/19 13:06	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

LABORATORY CONTROL SAMPLE: 1804483

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.4	102	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	17.9	89	70-130	
1,1,2-Trichloroethane	ug/L	20	18.6	93	70-130	
1,1-Dichloroethane	ug/L	20	17.3	86	68-121	
1,1-Dichloroethene	ug/L	20	17.5	88	63-129	
1,2-Dichloroethane	ug/L	20	17.7	88	67-117	
1,2-Dichloropropane	ug/L	20	17.9	90	69-121	
2-Butanone (MEK)	ug/L	20	19.5	98	59-128	
2-Hexanone	ug/L	20	19.0	95	49-145	
4-Methyl-2-pentanone (MIBK)	ug/L	20	18.8	94	63-126	
Acetone	ug/L	20	21.5	107	37-150	
Benzene	ug/L	20	18.6	93	70-130	
Bromodichloromethane	ug/L	20	18.4	92	70-130	
Bromoform	ug/L	20	16.8	84	65-130	
Bromomethane	ug/L	20	17.0	85	45-148	
Carbon disulfide	ug/L	20	19.4	97	55-123	
Carbon tetrachloride	ug/L	20	17.6	88	69-126	
Chlorobenzene	ug/L	20	18.8	94	70-130	
Chloroethane	ug/L	20	20.4	102	68-146	
Chloroform	ug/L	20	18.4	92	69-116	
Chloromethane	ug/L	20	20.7	103	56-129	
cis-1,2-Dichloroethene	ug/L	20	18.0	90	66-118	
cis-1,3-Dichloropropene	ug/L	20	18.1	90	70-130	
Dibromochloromethane	ug/L	20	17.5	87	70-130	
Ethylbenzene	ug/L	20	18.9	95	70-130	
m&p-Xylene	ug/L	40	37.7	94	70-130	
Methylene Chloride	ug/L	20	17.2	86	65-124	
o-Xylene	ug/L	20	18.2	91	70-130	
Styrene	ug/L	20	19.1	96	70-130	
Tetrachloroethene	ug/L	20	19.0	95	70-130	
Toluene	ug/L	20	18.5	93	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.8	89	64-123	
trans-1,3-Dichloropropene	ug/L	20	18.6	93	68-119	
Trichloroethene	ug/L	20	19.0	95	70-130	
Vinyl chloride	ug/L	20	20.6	103	70-130	
1,2-Dichloroethane-d4 (S)	%.			99	80-120	
4-Bromofluorobenzene (S)	%.			100	78-122	
Dibromofluoromethane (S)	%.			100	80-120	
Toluene-d8 (S)	%.			97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1804484 1804485

Parameter	Units	30335575001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	19.5	22.5	97	113	67-127	15	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1804484 1804485

Parameter	Units	30335575001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.0	20.8	80	104	55-118	26	
1,1,2-Trichloroethane	ug/L	ND	20	20	17.1	20.3	86	101	60-117	17	
1,1-Dichloroethane	ug/L	ND	20	20	17.6	19.6	88	98	68-118	11	
1,1-Dichloroethene	ug/L	ND	20	20	16.8	19.5	84	98	62-126	15	
1,2-Dichloroethane	ug/L	ND	20	20	16.3	19.2	81	96	67-117	16	
1,2-Dichloropropane	ug/L	ND	20	20	17.1	20.3	85	102	61-128	17	
2-Butanone (MEK)	ug/L	ND	20	20	15.3	17.0	76	85	63-175	10	
2-Hexanone	ug/L	ND	20	20	18.0	19.3	90	96	65-151	7	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	20	20	19.2	19.4	96	97	66-149	1	
Acetone	ug/L	ND	20	20	17.9	21.4	90	107	10-175	18	
Benzene	ug/L	ND	20	20	17.4	20.5	87	103	67-119	17	
Bromodichloromethane	ug/L	ND	20	20	16.1	19.5	80	98	67-126	19	
Bromoform	ug/L	ND	20	20	13.8	17.4	69	87	43-114	23	
Bromomethane	ug/L	ND	20	20	16.0	13.8	80	69	10-164	14	
Carbon disulfide	ug/L	ND	20	20	20.4	16.1	102	80	37-135	24	
Carbon tetrachloride	ug/L	ND	20	20	15.9	18.9	80	94	60-137	17	
Chlorobenzene	ug/L	ND	20	20	17.3	20.9	87	104	68-119	19	
Chloroethane	ug/L	ND	20	20	23.5	19.0	118	95	54-169	21	
Chloroform	ug/L	ND	20	20	16.3	19.4	82	97	69-113	17	
Chloromethane	ug/L	ND	20	20	21.9	21.5	110	107	43-159	2	
cis-1,2-Dichloroethene	ug/L	ND	20	20	15.6	19.7	76	97	65-121	23	
cis-1,3-Dichloropropene	ug/L	ND	20	20	15.9	19.2	80	96	61-120	19	
Dibromochloromethane	ug/L	ND	20	20	15.4	18.3	77	92	56-121	18	
Ethylbenzene	ug/L	ND	20	20	17.6	21.4	88	107	69-127	19	
m&p-Xylene	ug/L	ND	40	40	35.2	41.8	88	104	70-129	17	
Methylene Chloride	ug/L	ND	20	20	16.0	20.2	76	97	49-144	23	
o-Xylene	ug/L	ND	20	20	17.0	20.2	85	101	68-126	17	
Styrene	ug/L	ND	20	20	17.5	20.5	87	103	65-120	16	
Tetrachloroethene	ug/L	ND	20	20	18.1	21.3	90	107	64-123	17	
Toluene	ug/L	ND	20	20	17.0	20.1	85	100	70-130	17	
trans-1,2-Dichloroethene	ug/L	ND	20	20	16.6	20.8	83	104	66-119	22	
trans-1,3-Dichloropropene	ug/L	ND	20	20	15.9	19.3	80	97	52-117	19	
Trichloroethene	ug/L	ND	20	20	17.9	21.4	89	107	63-125	18	
Vinyl chloride	ug/L	ND	20	20	22.0	21.5	110	108	60-133	2	
1,2-Dichloroethane-d4 (S)	%.						99	100	80-120		
4-Bromofluorobenzene (S)	%.						99	98	78-122		
Dibromofluoromethane (S)	%.						101	101	80-120		
Toluene-d8 (S)	%.						95	95	80-120		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

QC Batch: 371926 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV
Associated Lab Samples: 30335575011

METHOD BLANK: 1804494 Matrix: Water
Associated Lab Samples: 30335575011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	11/20/19 13:19	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/20/19 13:19	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/20/19 13:19	
1,1-Dichloroethane	ug/L	ND	1.0	11/20/19 13:19	
1,1-Dichloroethene	ug/L	ND	1.0	11/20/19 13:19	
1,2-Dichloroethane	ug/L	ND	1.0	11/20/19 13:19	
1,2-Dichloropropane	ug/L	ND	1.0	11/20/19 13:19	
2-Butanone (MEK)	ug/L	ND	10.0	11/20/19 13:19	
2-Hexanone	ug/L	ND	10.0	11/20/19 13:19	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	11/20/19 13:19	
Acetone	ug/L	ND	10.0	11/20/19 13:19	
Benzene	ug/L	ND	1.0	11/20/19 13:19	
Bromodichloromethane	ug/L	ND	1.0	11/20/19 13:19	
Bromoform	ug/L	ND	1.0	11/20/19 13:19	
Bromomethane	ug/L	ND	1.0	11/20/19 13:19	
Carbon disulfide	ug/L	ND	1.0	11/20/19 13:19	
Carbon tetrachloride	ug/L	ND	1.0	11/20/19 13:19	
Chlorobenzene	ug/L	ND	1.0	11/20/19 13:19	
Chloroethane	ug/L	ND	1.0	11/20/19 13:19	
Chloroform	ug/L	ND	1.0	11/20/19 13:19	
Chloromethane	ug/L	ND	1.0	11/20/19 13:19	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/20/19 13:19	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/20/19 13:19	
Dibromochloromethane	ug/L	ND	1.0	11/20/19 13:19	
Ethylbenzene	ug/L	ND	1.0	11/20/19 13:19	
m&p-Xylene	ug/L	ND	2.0	11/20/19 13:19	
Methylene Chloride	ug/L	ND	1.0	11/20/19 13:19	
o-Xylene	ug/L	ND	1.0	11/20/19 13:19	
Styrene	ug/L	ND	1.0	11/20/19 13:19	
Tetrachloroethene	ug/L	ND	1.0	11/20/19 13:19	
Toluene	ug/L	ND	1.0	11/20/19 13:19	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/20/19 13:19	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/20/19 13:19	
Trichloroethene	ug/L	ND	1.0	11/20/19 13:19	
Vinyl chloride	ug/L	ND	1.0	11/20/19 13:19	
1,2-Dichloroethane-d4 (S)	%.	103	80-120	11/20/19 13:19	
4-Bromofluorobenzene (S)	%.	100	78-122	11/20/19 13:19	
Dibromofluoromethane (S)	%.	100	80-120	11/20/19 13:19	
Toluene-d8 (S)	%.	95	80-120	11/20/19 13:19	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

LABORATORY CONTROL SAMPLE: 1804495

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.0	100	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	18.0	90	70-130	
1,1,2-Trichloroethane	ug/L	20	19.0	95	70-130	
1,1-Dichloroethane	ug/L	20	18.2	91	68-121	
1,1-Dichloroethene	ug/L	20	17.3	86	63-129	
1,2-Dichloroethane	ug/L	20	18.3	91	67-117	
1,2-Dichloropropane	ug/L	20	17.9	89	69-121	
2-Butanone (MEK)	ug/L	20	19.6	98	59-128	
2-Hexanone	ug/L	20	17.9	89	49-145	
4-Methyl-2-pentanone (MIBK)	ug/L	20	19.8	99	63-126	
Acetone	ug/L	20	20.6	103	37-150	
Benzene	ug/L	20	18.7	94	70-130	
Bromodichloromethane	ug/L	20	18.7	93	70-130	
Bromoform	ug/L	20	16.5	83	65-130	
Bromomethane	ug/L	20	17.5	88	45-148	
Carbon disulfide	ug/L	20	19.2	96	55-123	
Carbon tetrachloride	ug/L	20	17.8	89	69-126	
Chlorobenzene	ug/L	20	19.0	95	70-130	
Chloroethane	ug/L	20	19.7	99	68-146	
Chloroform	ug/L	20	17.9	89	69-116	
Chloromethane	ug/L	20	20.3	101	56-129	
cis-1,2-Dichloroethene	ug/L	20	17.3	87	66-118	
cis-1,3-Dichloropropene	ug/L	20	17.6	88	70-130	
Dibromochloromethane	ug/L	20	18.0	90	70-130	
Ethylbenzene	ug/L	20	19.1	95	70-130	
m&p-Xylene	ug/L	40	39.1	98	70-130	
Methylene Chloride	ug/L	20	17.1	86	65-124	
o-Xylene	ug/L	20	18.5	92	70-130	
Styrene	ug/L	20	19.7	99	70-130	
Tetrachloroethene	ug/L	20	19.6	98	70-130	
Toluene	ug/L	20	19.1	96	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.9	89	64-123	
trans-1,3-Dichloropropene	ug/L	20	18.4	92	68-119	
Trichloroethene	ug/L	20	18.7	93	70-130	
Vinyl chloride	ug/L	20	20.6	103	70-130	
1,2-Dichloroethane-d4 (S)	%.			96	80-120	
4-Bromofluorobenzene (S)	%.			98	78-122	
Dibromofluoromethane (S)	%.			99	80-120	
Toluene-d8 (S)	%.			98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1804496 1804497

Parameter	Units	30335830006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	1.0 U	20	20	23.4	21.7	117	109	67-127	7	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1804496 1804497

Parameter	Units	30335830006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	20	20	19.0	18.7	95	94	55-118	1	
1,1,2-Trichloroethane	ug/L	1.0 U	20	20	20.2	19.2	101	96	60-117	5	
1,1-Dichloroethane	ug/L	1.0 U	20	20	20.9	18.7	105	94	68-118	11	
1,1-Dichloroethene	ug/L	1.0 U	20	20	20.4	18.9	102	94	62-126	8	
1,2-Dichloroethane	ug/L	1.0 U	20	20	21.1	18.3	105	91	67-117	14	
1,2-Dichloropropane	ug/L	1.0 U	20	20	19.9	18.3	100	91	61-128	9	
2-Butanone (MEK)	ug/L	10.0 U	20	20	16.7	19.2	84	96	63-175	14	
2-Hexanone	ug/L	10.0 U	20	20	17.4	18.7	87	93	65-151	7	
4-Methyl-2-pentanone (MIBK)	ug/L	10.0 U	20	20	19.1	20.7	95	104	66-149	8	
Acetone	ug/L	10.0 U	20	20	16.5	21.4	82	107	10-175	26	
Benzene	ug/L	1.0 U	20	20	21.5	19.3	107	97	67-119	11	
Bromodichloromethane	ug/L	1.0 U	20	20	20.5	18.6	103	93	67-126	10	
Bromoform	ug/L	1.0 U	20	20	15.3	15.2	76	76	43-114	1	
Bromomethane	ug/L	1.0 U	20	20	11.1	10.6	55	53	10-164	5	
Carbon disulfide	ug/L	1.0 U	20	20	19.4	18.5	97	93	37-135	5	
Carbon tetrachloride	ug/L	1.0 U	20	20	19.5	17.7	98	89	60-137	10	
Chlorobenzene	ug/L	1.0 U	20	20	20.9	19.8	105	99	68-119	6	
Chloroethane	ug/L	1.0 U	20	20	18.6	19.7	93	99	54-169	6	
Chloroform	ug/L	1.0 U	20	20	18.9	18.4	95	92	69-113	3	
Chloromethane	ug/L	1.0 U	20	20	18.5	19.0	92	95	43-159	3	
cis-1,2-Dichloroethene	ug/L	1.0 U	20	20	18.6	17.5	93	87	65-121	6	
cis-1,3-Dichloropropene	ug/L	1.0 U	20	20	19.0	17.3	95	87	61-120	9	
Dibromochloromethane	ug/L	1.0 U	20	20	18.0	17.4	90	87	56-121	4	
Ethylbenzene	ug/L	1.0 U	20	20	21.1	20.7	106	103	69-127	2	
m&p-Xylene	ug/L	2.0 U	40	40	43.7	41.3	109	103	70-129	6	
Methylene Chloride	ug/L	0.90J	20	20	20.5	17.2	98	81	49-144	18	
o-Xylene	ug/L	1.0 U	20	20	20.7	19.8	104	99	68-126	5	
Styrene	ug/L	1.0 U	20	20	19.9	18.6	100	93	65-120	7	
Tetrachloroethene	ug/L	0.51J	20	20	22.4	21.4	109	105	64-123	4	
Toluene	ug/L	1.0 U	20	20	21.1	20.1	105	100	70-130	5	
trans-1,2-Dichloroethene	ug/L	1.0 U	20	20	20.9	18.4	104	92	66-119	13	
trans-1,3-Dichloropropene	ug/L	1.0 U	20	20	18.8	17.7	94	88	52-117	6	
Trichloroethene	ug/L	1.0 U	20	20	21.4	19.5	107	98	63-125	9	
Vinyl chloride	ug/L	1.0 U	20	20	18.9	20.4	95	102	60-133	7	
1,2-Dichloroethane-d4 (S)	%.						98	93	80-120		
4-Bromofluorobenzene (S)	%.						102	97	78-122		
Dibromofluoromethane (S)	%.						103	97	80-120		
Toluene-d8 (S)	%.						99	99	80-120		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

QC Batch: 371183 Analysis Method: EPA 8015D
QC Batch Method: EPA 3510C Analysis Description: EPA 8015D TPH
Associated Lab Samples: 30335575001, 30335575002, 30335575003, 30335575004, 30335575005, 30335575007, 30335575008, 30335575009

METHOD BLANK: 1801091 Matrix: Water
Associated Lab Samples: 30335575001, 30335575002, 30335575003, 30335575004, 30335575005, 30335575007, 30335575008, 30335575009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH (C10-C28)	mg/L	ND	0.10	11/18/19 15:19	
o-Terphenyl (S)	%.	61	17-90	11/18/19 15:19	

LABORATORY CONTROL SAMPLE: 1801092

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH (C10-C28)	mg/L	1	0.87	87	43-107	
o-Terphenyl (S)	%.			84	17-90	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

QC Batch: 371493 Analysis Method: EPA 8015D
QC Batch Method: EPA 3510C Analysis Description: EPA 8015D TPH
Associated Lab Samples: 30335575011

METHOD BLANK: 1802691 Matrix: Water
Associated Lab Samples: 30335575011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH (C10-C28)	mg/L	ND	0.10	11/20/19 11:04	
o-Terphenyl (S)	%.	74	17-90	11/20/19 11:04	

LABORATORY CONTROL SAMPLE: 1802692

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH (C10-C28)	mg/L	1	0.83	83	43-107	
o-Terphenyl (S)	%.			79	17-90	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1802693 1802694

Parameter	Units	30335790001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH (C10-C28)	mg/L	0.13	0.98	0.98	0.66	0.84	53	72	26-112	24	
o-Terphenyl (S)	%.						58	77	17-90		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

QC Batch: 371182 Analysis Method: EPA 8081B
QC Batch Method: EPA 3510C Analysis Description: 8081A GCS Pesticides
Associated Lab Samples: 30335575001, 30335575002, 30335575003, 30335575004, 30335575005, 30335575007, 30335575008, 30335575009

METHOD BLANK: 1801089 Matrix: Water
Associated Lab Samples: 30335575001, 30335575002, 30335575003, 30335575004, 30335575005, 30335575007, 30335575008, 30335575009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.25	11/18/19 20:51	
Decachlorobiphenyl (S)	%.	72	10-129	11/18/19 20:51	
Tetrachloro-m-xylene (S)	%.	70	40-102	11/18/19 20:51	

LABORATORY CONTROL SAMPLE: 1801090

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlordane (Technical)	ug/L	2.5	1.8	73	47-112	
Decachlorobiphenyl (S)	%.			51	10-129	
Tetrachloro-m-xylene (S)	%.			69	40-102	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

QC Batch: 371492 Analysis Method: EPA 8081B
QC Batch Method: EPA 3510C Analysis Description: 8081A GCS Pesticides
Associated Lab Samples: 30335575011

METHOD BLANK: 1802688 Matrix: Water
Associated Lab Samples: 30335575011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.25	11/21/19 21:04	
Decachlorobiphenyl (S)	%.	78	10-129	11/21/19 21:04	
Tetrachloro-m-xylene (S)	%.	79	40-102	11/21/19 21:04	

LABORATORY CONTROL SAMPLE: 1802689

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlordane (Technical)	ug/L	2.5	1.9	77	47-112	
Decachlorobiphenyl (S)	%.			68	10-129	
Tetrachloro-m-xylene (S)	%.			76	40-102	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

QC Batch: 371180 Analysis Method: EPA 8082A
QC Batch Method: EPA 3510C Analysis Description: 8082A GCS PCB Mod
Associated Lab Samples: 30335575001, 30335575002, 30335575003, 30335575004, 30335575005, 30335575006, 30335575007, 30335575008, 30335575009, 30335575010

METHOD BLANK: 1801085 Matrix: Water
Associated Lab Samples: 30335575001, 30335575002, 30335575003, 30335575004, 30335575005, 30335575006, 30335575007, 30335575008, 30335575009, 30335575010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	ND	0.25	11/19/19 13:06	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.25	11/19/19 13:06	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.25	11/19/19 13:06	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.25	11/19/19 13:06	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.25	11/19/19 13:06	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.25	11/19/19 13:06	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.25	11/19/19 13:06	
Decachlorobiphenyl (S)	%.	74	10-120	11/19/19 13:06	
Tetrachloro-m-xylene (S)	%.	76	36-108	11/19/19 13:06	

LABORATORY CONTROL SAMPLE: 1801086

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	2.5	1.9	75	45-121	
PCB-1260 (Aroclor 1260)	ug/L	2.5	1.8	73	50-121	
Decachlorobiphenyl (S)	%.			46	10-120	
Tetrachloro-m-xylene (S)	%.			76	36-108	

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REPORT OF LABORATORY ANALYSIS

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1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

QC Batch: 371491 Analysis Method: EPA 8082A
QC Batch Method: EPA 3510C Analysis Description: 8082A GCS PCB Mod
Associated Lab Samples: 30335575011

METHOD BLANK: 1802684 Matrix: Water
Associated Lab Samples: 30335575011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	ND	0.25	11/21/19 14:57	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1232 (Aroclor 1232)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1242 (Aroclor 1242)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1248 (Aroclor 1248)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1254 (Aroclor 1254)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1260 (Aroclor 1260)	ug/L	ND	0.25	11/21/19 14:57	CH
Decachlorobiphenyl (S)	%.	87	10-120	11/21/19 14:57	
Tetrachloro-m-xylene (S)	%.	82	36-108	11/21/19 14:57	

LABORATORY CONTROL SAMPLE: 1802685

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	2.5	2.1	83	45-121	
PCB-1260 (Aroclor 1260)	ug/L	2.5	2.3	91	50-121	CH
Decachlorobiphenyl (S)	%.			63	10-120	
Tetrachloro-m-xylene (S)	%.			79	36-108	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1802686 1802687

Parameter	Units	30335183004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
PCB-1016 (Aroclor 1016)	ug/L	ND	2.4	2.5	5.9	5.7	242	232	27-137	3	D3,MH
PCB-1260 (Aroclor 1260)	ug/L	ND	2.4	2.5	71.7	60.5	2940	2460	18-139	17	CH,D3,E, MH
Decachlorobiphenyl (S)	%.						108	109	10-120		CH
Tetrachloro-m-xylene (S)	%.						86	87	36-108		

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REPORT OF LABORATORY ANALYSIS

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1638 Roseytown Road - Suites 2,3,4
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(724)850-5600

QUALIFIERS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA	Pace Analytical Services - Greensburg

BATCH QUALIFIERS

Batch: 371180

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 371182

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 371183

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 371492

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1c	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
C2	Relative percent difference between results from each column was greater than 40%. The lower of the two results was reported.
CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.

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QUALIFIERS

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

ANALYTE QUALIFIERS

MH	Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.
S2	Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).
SR	Surrogate recovery was below laboratory control limits. Results may be biased low.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30335575001	**PZ-D14**	EPA 3510C	371183	EPA 8015D	371377
30335575002	**MW-12**	EPA 3510C	371183	EPA 8015D	371377
30335575003	**MW-11**	EPA 3510C	371183	EPA 8015D	371377
30335575004	**PZ-D7**	EPA 3510C	371183	EPA 8015D	371377
30335575005	**MW-9**	EPA 3510C	371183	EPA 8015D	371377
30335575007	**PZ-D2**	EPA 3510C	371183	EPA 8015D	371377
30335575008	**MW-S1**	EPA 3510C	371183	EPA 8015D	371377
30335575009	**MW-D1**	EPA 3510C	371183	EPA 8015D	371377
30335575011	**MW-D4**	EPA 3510C	371493	EPA 8015D	371734
30335575001	**PZ-D14**	EPA 3510C	371182	EPA 8081B	371290
30335575002	**MW-12**	EPA 3510C	371182	EPA 8081B	371290
30335575003	**MW-11**	EPA 3510C	371182	EPA 8081B	371290
30335575004	**PZ-D7**	EPA 3510C	371182	EPA 8081B	371290
30335575005	**MW-9**	EPA 3510C	371182	EPA 8081B	371290
30335575007	**PZ-D2**	EPA 3510C	371182	EPA 8081B	371290
30335575008	**MW-S1**	EPA 3510C	371182	EPA 8081B	371290
30335575009	**MW-D1**	EPA 3510C	371182	EPA 8081B	371290
30335575011	**MW-D4**	EPA 3510C	371492	EPA 8081B	371789
30335575001	**PZ-D14**	EPA 3510C	371180	EPA 8082A	371288
30335575002	**MW-12**	EPA 3510C	371180	EPA 8082A	371288
30335575003	**MW-11**	EPA 3510C	371180	EPA 8082A	371288
30335575004	**PZ-D7**	EPA 3510C	371180	EPA 8082A	371288
30335575005	**MW-9**	EPA 3510C	371180	EPA 8082A	371288
30335575006	**Equipment Blank-1**	EPA 3510C	371180	EPA 8082A	371288
30335575007	**PZ-D2**	EPA 3510C	371180	EPA 8082A	371288
30335575008	**MW-S1**	EPA 3510C	371180	EPA 8082A	371288
30335575009	**MW-D1**	EPA 3510C	371180	EPA 8082A	371288
30335575010	**Field Blank-1**	EPA 3510C	371180	EPA 8082A	371288
30335575011	**MW-D4**	EPA 3510C	371491	EPA 8082A	371791
30335575001	**PZ-D14**	EPA 5030/8015B	371203		
30335575002	**MW-12**	EPA 5030/8015B	371203		
30335575003	**MW-11**	EPA 5030/8015B	371203		
30335575004	**PZ-D7**	EPA 5030/8015B	371203		
30335575005	**MW-9**	EPA 5030/8015B	371203		
30335575007	**PZ-D2**	EPA 5030/8015B	371203		
30335575008	**MW-S1**	EPA 5030/8015B	371203		
30335575009	**MW-D1**	EPA 5030/8015B	371203		
30335575011	**MW-D4**	EPA 5030/8015B	371203		
30335575001	**PZ-D14**	EPA 8260B	371918		
30335575002	**MW-12**	EPA 8260B	371918		
30335575003	**MW-11**	EPA 8260B	371918		
30335575004	**PZ-D7**	EPA 8260B	371918		
30335575005	**MW-9**	EPA 8260B	371918		
30335575006	**Equipment Blank-1**	EPA 8260B	371918		
30335575007	**PZ-D2**	EPA 8260B	371918		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PTTI (Building 20-25 Area)
Pace Project No.: 30335575

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30335575008	**MW-S1**	EPA 8260B	371918		
30335575009	**MW-D1**	EPA 8260B	371918		
30335575010	**Field Blank-1**	EPA 8260B	371918		
30335575011	**MW-D4**	EPA 8260B	371926		

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

WO# : 30335575

30335575

Company: GES, Inc.	Billing Information: gesinvoices@gesonline.com
Address: 301 Commerce Park Drive. Cranberry Township, PA 16066	
Report To: Erin Letrick	Email To: GreatLakesRegion@gesonline.com
Copy To:	Site Collection Info/Address: 30 Curry Ave.
Customer Project Name/Number: PTTI (Building 20-25 Area)	State: PA County/City: Washington/Canonsburg Time Zone Collected: [ ] PT [ ] MT [ ] CT [✓] ET
Phone: 800-267-2549 Email:	Site/Facility ID #: 0705598/62/882 Org #1407
Collected By (print): Addison Semar	Purchase Order #: Quote #: 11899-00
Collected By (signature): Addison Semar	Turnaround Date Required: Standard 10-day TAT
Sample Disposal: [✓] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
	Compliance Monitoring? [ ] Yes [✓] No
	DW PWS ID #: DW Location Code:
	Immediately Packed on Ice: [✓] Yes [ ] No
	Field Filtered (if applicable): [ ] Yes [✓] No Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type ** | U | 3 | U | U |

** Preservative Types: (1) nitric acid, (2) sulfu... (6) methanol, (7) sodium bisulfate, (8) sodium thios... (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	TPH (GRO/DRO) (8015)	VOC 8260B	PCB (8082)	Chlordane (8081)					
PZ-D14	GW	Grab			11-12-19	1010		8	X	X	X	X					
MW-12						1110		8	X	X	X	X					
MW-11						1205		8	X	X	X	X					
PZ-D7						1245		8	X	X	X	X					
MW-9						1335		8	X	X	X	X					
Equipment Blank-1						1345		4		X	X						
PZ-D2						1405		8	X	X	X	X					
MW-51						1425		8	X	X	X	X					
MW-D1						1445		8	X	X	X	X					
Field Blank-1						1455		4		X	X						

Analyses

Lab Profile/Line:

Lab Sample Receipt Chec...

Custody Seals Present/Intact	Y	N NA
Custody Signatures Present	Y	N NA
Collector Signature Present	Y	N NA
Bottles Intact	Y	N NA
Correct Bottles	Y	N NA
Sufficient Volume	Y	N NA
Samples Received on Ice	Y	N NA
VOA - Headspace Acceptable	Y	N NA
USDA Regulated Soils	Y	N NA
Samples in Holding Time	Y	N NA
Residual Chlorine Present	Y	N NA
Cl Strips:		
Sample pH Acceptable	Y	N NA
pH Strips: 121824		
Sulfide Present	Y	N NA
Lead Acetate Strips:		

LAB USE ONLY:
Lab Sample # / Comments:

PH/PB

CC1
CC2
CC3
CC4
CC5
CC6
CC7
CC8
CC9
CC10

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: (Wet) Blue Dry None

Packing Material Used: Ice, Bubble wrap

Radchem sample(s) screened (<500 cpm): Y N (NA)

SHORT HOLDS PRESENT (<72 hours): Y (N) N/A

Lab Tracking #: N/A

Samples received via: FEDEX UPS Client Courier (Pace Courier)

Lab Sample Temperature Info:
Temp Blank Received: Y (N) NA
Therm ID#: 10
Cooler 1 Temp Upon Receipt: 2.5,3.3 oC
Cooler 1 Therm Corr. Factor: 0 oC
Cooler 1 Corrected Temp: 2.5,3.3 oC
Comments:
PH 11-14-19

	Date/Time:		Date/Time:
Relinquished by/Company: (Signature) Addison Semar / GES	11-13-19 / 1515	Received by/Company: (Signature) Samples Receiving / GES	11-13-19 / 1515
Relinquished by/Company: (Signature) Samples Receiving / GES		Received by/Company: (Signature) Bill Graham	11-14-19 1145
Relinquished by/Company: (Signature) Bill Graham	11-14-19 1730	Received by/Company: (Signature)	11-14-19 17:30

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y (N) NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 2

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

WO# : 30335575

PM: RDC Due Date: 12/03/19

CLIENT: GES W PA

Company: GES, Inc.	Billing Information: gesinvoices@gesonline.com
Address: 301 Commerce Park Drive, Cranberry Township, PA 16066	
Report To: Erin Letrick	Email To: GreatLakesRegion@gesonline.com
Copy To:	Site Collection Info/Address: 30 Curry Ave.
Customer Project Name/Number: PTTI (Building 20-25 Area)	State: PA County/City: Washington/Canonsburg Time Zone Collected: [ ] PT [ ] MT [ ] CT [✓] ET
Phone: 800-267-2549 Email:	Site/Facility ID #: 0705598/62/882 Org #1407 — Compliance Monitoring? [ ] Yes [✓] No
Collected By (print): Addison Semar	Purchase Order #: Quote #: 11899-00 — DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: Standard 10-day TAT — Immediately Packed on Ice: [✓] Yes [ ] No
Sample Disposal: [✓] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) — Field Filtered (if applicable): [ ] Yes [✓] No Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	TPH (GRO/DRO) (8015)	VOC 8260B	PCB (8082)	Chlordane (8081)	Lab Profile/Line:
MW-D4	GW	Grab			11-13-19	1020		4	X	X	X	X	See page 1 of 1

** Preservative Types: (1) nitric acid, (2) su... (6) methanol, (7) sodium bisulfate, (8) sodi... (C) ammonium hydroxide, (D) TSP, (U) Unp...

Container Preservative T... U | 3 | U | U

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used: Ice, Bubble wrap

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: 1.3 °C
Cooler 1 Therm Corr. Factor: 0 °C
Cooler 1 Corrected Temp: 1.3 °C
Comments:
PM 11-14-19

Relinquished by/Company: (Signature) addison Semar / GES	Date/Time: 11-13-19/1515	Received by/Company: (Signature) Samples Receiving / GES	Date/Time: 11-13-19/1515
Relinquished by/Company: (Signature) Samples Receiving / GES	Date/Time:	Received by/Company: (Signature) Bill Graham	Date/Time: 11-14-19 1145
Relinquished by/Company: (Signature) Bill Graham 11-14-19 1730	Date/Time:	Received by/Company: (Signature)	Date/Time: 11-14-19 17:30

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 2 of: 2

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

November 25, 2019

GES Great Lakes Region
Groundwater & Environmental Services, Inc.
301 Commerce Park Drive
Cranberry Twp, PA 16066

RE: Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

Dear GES Lakes Region:
Enclosed are the analytical results for sample(s) received by the laboratory on November 14, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rachel Christner
rachel.christner@pacelabs.com
724-850-5611
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30335578001	**MW-D16**	EPA 8015D	SEL	2	PASI-PA
		EPA 8081B	TAW	3	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335578002	**MW-S8**	EPA 8015D	SEL	2	PASI-PA
		EPA 8081B	TAW	3	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

Sample: MW-D16 **Lab ID: 30335578001** Collected: 11/13/19 10:50 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D Preparation Method: EPA 3510C							
TPH (C10-C28)	**2.1**	mg/L	0.53	5	11/19/19 11:41	11/20/19 15:18		
Surrogates								
o-Terphenyl (S)	75	%.	17-90	5	11/19/19 11:41	11/20/19 15:18	84-15-1	
8081B Organochlorine Pesticide	Analytical Method: EPA 8081B Preparation Method: EPA 3510C							
Chlordane (Technical)	ND	ug/L	0.25	1	11/19/19 13:34	11/21/19 19:37	57-74-9	1c
Surrogates								
Tetrachloro-m-xylene (S)	70	%.	40-102	1	11/19/19 13:34	11/21/19 19:37	877-09-8	
Decachlorobiphenyl (S)	77	%.	10-129	1	11/19/19 13:34	11/21/19 19:37	2051-24-3	
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	24.5	100	11/19/19 13:34	11/22/19 12:57	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	24.5	100	11/19/19 13:34	11/22/19 12:57	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	24.5	100	11/19/19 13:34	11/22/19 12:57	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	24.5	100	11/19/19 13:34	11/22/19 12:57	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	24.5	100	11/19/19 13:34	11/22/19 12:57	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	24.5	100	11/19/19 13:34	11/22/19 12:57	11097-69-1	
PCB-1260 (Aroclor 1260)	**444**	ug/L	24.5	100	11/19/19 13:34	11/22/19 12:57	11096-82-5	2c
Surrogates								
Tetrachloro-m-xylene (S)	88	%.	36-108	100	11/19/19 13:34	11/22/19 12:57	877-09-8	
Decachlorobiphenyl (S)	124	%.	10-120	100	11/19/19 13:34	11/22/19 12:57	2051-24-3	S4
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/16/19 01:02		IU
Surrogates								
4-Bromofluorobenzene (S)	50	%.	80-120	1		11/16/19 01:02	460-00-4	IU,S2, SR
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 19:55	67-64-1	
Benzene	**2.8**	ug/L	1.0	1		11/20/19 19:55	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 19:55	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 19:55	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 19:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 19:55	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 19:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 19:55	56-23-5	
Chlorobenzene	**29.1**	ug/L	1.0	1		11/20/19 19:55	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 19:55	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 19:55	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 19:55	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 19:55	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 19:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 19:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 19:55	75-35-4	
cis-1,2-Dichloroethene	**471**	ug/L	5.0	5		11/20/19 20:20	156-59-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

Sample: MW-D16 **Lab ID: 30335578001** Collected: 11/13/19 10:50 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
trans-1,2-Dichloroethene	**8.0**	ug/L	1.0	1		11/20/19 19:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 19:55	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 19:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 19:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 19:55	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 19:55	591-78-6	
Methylene Chloride	**1.1**	ug/L	1.0	1		11/20/19 19:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 19:55	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 19:55	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 19:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/20/19 19:55	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 19:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 19:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 19:55	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/20/19 19:55	79-01-6	
Vinyl chloride	**184**	ug/L	1.0	1		11/20/19 19:55	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 19:55	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/20/19 19:55	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	97	%.	78-122	1		11/20/19 19:55	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%.	80-120	1		11/20/19 19:55	17060-07-0	
Toluene-d8 (S)	95	%.	80-120	1		11/20/19 19:55	2037-26-5	
Dibromofluoromethane (S)	102	%.	80-120	1		11/20/19 19:55	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

Sample: MW-S8 **Lab ID: 30335578002** Collected: 11/13/19 11:15 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D Preparation Method: EPA 3510C							
TPH (C10-C28)	**0.29**	mg/L	0.11	1	11/19/19 11:41	11/20/19 13:06		
Surrogates								
o-Terphenyl (S)	60	%.	17-90	1	11/19/19 11:41	11/20/19 13:06	84-15-1	
8081B Organochlorine Pesticide	Analytical Method: EPA 8081B Preparation Method: EPA 3510C							
Chlordane (Technical)	ND	ug/L	0.31	1	11/19/19 13:34	11/21/19 19:27	57-74-9	1c
Surrogates								
Tetrachloro-m-xylene (S)	70	%.	40-102	1	11/19/19 13:34	11/21/19 19:27	877-09-8	
Decachlorobiphenyl (S)	57	%.	10-129	1	11/19/19 13:34	11/21/19 19:27	2051-24-3	
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	3.1	10	11/19/19 13:34	11/22/19 13:06	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	3.1	10	11/19/19 13:34	11/22/19 13:06	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	3.1	10	11/19/19 13:34	11/22/19 13:06	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	3.1	10	11/19/19 13:34	11/22/19 13:06	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	3.1	10	11/19/19 13:34	11/22/19 13:06	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	3.1	10	11/19/19 13:34	11/22/19 13:06	11097-69-1	
PCB-1260 (Aroclor 1260)	**27.1**	ug/L	3.1	10	11/19/19 13:34	11/22/19 13:06	11096-82-5	2c
Surrogates								
Tetrachloro-m-xylene (S)	86	%.	36-108	10	11/19/19 13:34	11/22/19 13:06	877-09-8	
Decachlorobiphenyl (S)	72	%.	10-120	10	11/19/19 13:34	11/22/19 13:06	2051-24-3	
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/16/19 01:21		
Surrogates								
4-Bromofluorobenzene (S)	95	%.	80-120	1		11/16/19 01:21	460-00-4	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/20/19 16:12	67-64-1	
Benzene	ND	ug/L	1.0	1		11/20/19 16:12	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/20/19 16:12	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/20/19 16:12	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/20/19 16:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/20/19 16:12	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/20/19 16:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/20/19 16:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/20/19 16:12	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/20/19 16:12	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/20/19 16:12	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/20/19 16:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/20/19 16:12	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/20/19 16:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/20/19 16:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/20/19 16:12	75-35-4	
cis-1,2-Dichloroethene	**17.7**	ug/L	1.0	1		11/20/19 16:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/20/19 16:12	156-60-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

Sample: MW-S8 **Lab ID: 30335578002** Collected: 11/13/19 11:15 Received: 11/14/19 17:30 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
1,2-Dichloropropane	ND	ug/L	1.0	1		11/20/19 16:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 16:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/20/19 16:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/20/19 16:12	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/20/19 16:12	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		11/20/19 16:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/20/19 16:12	108-10-1	
Styrene	ND	ug/L	1.0	1		11/20/19 16:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/20/19 16:12	79-34-5	
Tetrachloroethene	**15.6**	ug/L	1.0	1		11/20/19 16:12	127-18-4	
Toluene	ND	ug/L	1.0	1		11/20/19 16:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/20/19 16:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/20/19 16:12	79-00-5	
Trichloroethene	**5.5**	ug/L	1.0	1		11/20/19 16:12	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/20/19 16:12	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/20/19 16:12	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/20/19 16:12	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	99	%.	78-122	1		11/20/19 16:12	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%.	80-120	1		11/20/19 16:12	17060-07-0	
Toluene-d8 (S)	95	%.	80-120	1		11/20/19 16:12	2037-26-5	
Dibromofluoromethane (S)	102	%.	80-120	1		11/20/19 16:12	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

QC Batch: 371203 Analysis Method: EPA 5030/8015B
QC Batch Method: EPA 5030/8015B Analysis Description: Gasoline Range Organics
Associated Lab Samples: 30335578001, 30335578002

METHOD BLANK: 1801114 Matrix: Water
Associated Lab Samples: 30335578001, 30335578002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH (C06-C10)	ug/L	ND	200	11/15/19 18:26	
4-Bromofluorobenzene (S)	%.	95	80-120	11/15/19 18:26	

LABORATORY CONTROL SAMPLE: 1801115

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH (C06-C10)	ug/L	1000	791	79	66-129	
4-Bromofluorobenzene (S)	%.			97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1801116 1801117

Parameter	Units	30335167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH (C06-C10)	ug/L	ND	1000	1000	853	899	84	89	51-126	5	
4-Bromofluorobenzene (S)	%.						99	100	80-120		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
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(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

QC Batch: 371926 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV
Associated Lab Samples: 30335578001, 30335578002

METHOD BLANK: 1804494 Matrix: Water
Associated Lab Samples: 30335578001, 30335578002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	11/20/19 13:19	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/20/19 13:19	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/20/19 13:19	
1,1-Dichloroethane	ug/L	ND	1.0	11/20/19 13:19	
1,1-Dichloroethene	ug/L	ND	1.0	11/20/19 13:19	
1,2-Dichloroethane	ug/L	ND	1.0	11/20/19 13:19	
1,2-Dichloropropane	ug/L	ND	1.0	11/20/19 13:19	
2-Butanone (MEK)	ug/L	ND	10.0	11/20/19 13:19	
2-Hexanone	ug/L	ND	10.0	11/20/19 13:19	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	11/20/19 13:19	
Acetone	ug/L	ND	10.0	11/20/19 13:19	
Benzene	ug/L	ND	1.0	11/20/19 13:19	
Bromodichloromethane	ug/L	ND	1.0	11/20/19 13:19	
Bromoform	ug/L	ND	1.0	11/20/19 13:19	
Bromomethane	ug/L	ND	1.0	11/20/19 13:19	
Carbon disulfide	ug/L	ND	1.0	11/20/19 13:19	
Carbon tetrachloride	ug/L	ND	1.0	11/20/19 13:19	
Chlorobenzene	ug/L	ND	1.0	11/20/19 13:19	
Chloroethane	ug/L	ND	1.0	11/20/19 13:19	
Chloroform	ug/L	ND	1.0	11/20/19 13:19	
Chloromethane	ug/L	ND	1.0	11/20/19 13:19	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/20/19 13:19	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/20/19 13:19	
Dibromochloromethane	ug/L	ND	1.0	11/20/19 13:19	
Ethylbenzene	ug/L	ND	1.0	11/20/19 13:19	
m&p-Xylene	ug/L	ND	2.0	11/20/19 13:19	
Methylene Chloride	ug/L	ND	1.0	11/20/19 13:19	
o-Xylene	ug/L	ND	1.0	11/20/19 13:19	
Styrene	ug/L	ND	1.0	11/20/19 13:19	
Tetrachloroethene	ug/L	ND	1.0	11/20/19 13:19	
Toluene	ug/L	ND	1.0	11/20/19 13:19	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/20/19 13:19	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/20/19 13:19	
Trichloroethene	ug/L	ND	1.0	11/20/19 13:19	
Vinyl chloride	ug/L	ND	1.0	11/20/19 13:19	
1,2-Dichloroethane-d4 (S)	%.	103	80-120	11/20/19 13:19	
4-Bromofluorobenzene (S)	%.	100	78-122	11/20/19 13:19	
Dibromofluoromethane (S)	%.	100	80-120	11/20/19 13:19	
Toluene-d8 (S)	%.	95	80-120	11/20/19 13:19	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

LABORATORY CONTROL SAMPLE: 1804495

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.0	100	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	18.0	90	70-130	
1,1,2-Trichloroethane	ug/L	20	19.0	95	70-130	
1,1-Dichloroethane	ug/L	20	18.2	91	68-121	
1,1-Dichloroethene	ug/L	20	17.3	86	63-129	
1,2-Dichloroethane	ug/L	20	18.3	91	67-117	
1,2-Dichloropropane	ug/L	20	17.9	89	69-121	
2-Butanone (MEK)	ug/L	20	19.6	98	59-128	
2-Hexanone	ug/L	20	17.9	89	49-145	
4-Methyl-2-pentanone (MIBK)	ug/L	20	19.8	99	63-126	
Acetone	ug/L	20	20.6	103	37-150	
Benzene	ug/L	20	18.7	94	70-130	
Bromodichloromethane	ug/L	20	18.7	93	70-130	
Bromoform	ug/L	20	16.5	83	65-130	
Bromomethane	ug/L	20	17.5	88	45-148	
Carbon disulfide	ug/L	20	19.2	96	55-123	
Carbon tetrachloride	ug/L	20	17.8	89	69-126	
Chlorobenzene	ug/L	20	19.0	95	70-130	
Chloroethane	ug/L	20	19.7	99	68-146	
Chloroform	ug/L	20	17.9	89	69-116	
Chloromethane	ug/L	20	20.3	101	56-129	
cis-1,2-Dichloroethene	ug/L	20	17.3	87	66-118	
cis-1,3-Dichloropropene	ug/L	20	17.6	88	70-130	
Dibromochloromethane	ug/L	20	18.0	90	70-130	
Ethylbenzene	ug/L	20	19.1	95	70-130	
m&p-Xylene	ug/L	40	39.1	98	70-130	
Methylene Chloride	ug/L	20	17.1	86	65-124	
o-Xylene	ug/L	20	18.5	92	70-130	
Styrene	ug/L	20	19.7	99	70-130	
Tetrachloroethene	ug/L	20	19.6	98	70-130	
Toluene	ug/L	20	19.1	96	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.9	89	64-123	
trans-1,3-Dichloropropene	ug/L	20	18.4	92	68-119	
Trichloroethene	ug/L	20	18.7	93	70-130	
Vinyl chloride	ug/L	20	20.6	103	70-130	
1,2-Dichloroethane-d4 (S)	%.			96	80-120	
4-Bromofluorobenzene (S)	%.			98	78-122	
Dibromofluoromethane (S)	%.			99	80-120	
Toluene-d8 (S)	%.			98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1804496 1804497

Parameter	Units	30335830006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	1.0 U	20	20	23.4	21.7	117	109	67-127	7	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1804496 1804497

Parameter	Units	30335830006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	20	20	19.0	18.7	95	94	55-118	1	
1,1,2-Trichloroethane	ug/L	1.0 U	20	20	20.2	19.2	101	96	60-117	5	
1,1-Dichloroethane	ug/L	1.0 U	20	20	20.9	18.7	105	94	68-118	11	
1,1-Dichloroethene	ug/L	1.0 U	20	20	20.4	18.9	102	94	62-126	8	
1,2-Dichloroethane	ug/L	1.0 U	20	20	21.1	18.3	105	91	67-117	14	
1,2-Dichloropropane	ug/L	1.0 U	20	20	19.9	18.3	100	91	61-128	9	
2-Butanone (MEK)	ug/L	10.0 U	20	20	16.7	19.2	84	96	63-175	14	
2-Hexanone	ug/L	10.0 U	20	20	17.4	18.7	87	93	65-151	7	
4-Methyl-2-pentanone (MIBK)	ug/L	10.0 U	20	20	19.1	20.7	95	104	66-149	8	
Acetone	ug/L	10.0 U	20	20	16.5	21.4	82	107	10-175	26	
Benzene	ug/L	1.0 U	20	20	21.5	19.3	107	97	67-119	11	
Bromodichloromethane	ug/L	1.0 U	20	20	20.5	18.6	103	93	67-126	10	
Bromoform	ug/L	1.0 U	20	20	15.3	15.2	76	76	43-114	1	
Bromomethane	ug/L	1.0 U	20	20	11.1	10.6	55	53	10-164	5	
Carbon disulfide	ug/L	1.0 U	20	20	19.4	18.5	97	93	37-135	5	
Carbon tetrachloride	ug/L	1.0 U	20	20	19.5	17.7	98	89	60-137	10	
Chlorobenzene	ug/L	1.0 U	20	20	20.9	19.8	105	99	68-119	6	
Chloroethane	ug/L	1.0 U	20	20	18.6	19.7	93	99	54-169	6	
Chloroform	ug/L	1.0 U	20	20	18.9	18.4	95	92	69-113	3	
Chloromethane	ug/L	1.0 U	20	20	18.5	19.0	92	95	43-159	3	
cis-1,2-Dichloroethene	ug/L	1.0 U	20	20	18.6	17.5	93	87	65-121	6	
cis-1,3-Dichloropropene	ug/L	1.0 U	20	20	19.0	17.3	95	87	61-120	9	
Dibromochloromethane	ug/L	1.0 U	20	20	18.0	17.4	90	87	56-121	4	
Ethylbenzene	ug/L	1.0 U	20	20	21.1	20.7	106	103	69-127	2	
m&p-Xylene	ug/L	2.0 U	40	40	43.7	41.3	109	103	70-129	6	
Methylene Chloride	ug/L	0.90J	20	20	20.5	17.2	98	81	49-144	18	
o-Xylene	ug/L	1.0 U	20	20	20.7	19.8	104	99	68-126	5	
Styrene	ug/L	1.0 U	20	20	19.9	18.6	100	93	65-120	7	
Tetrachloroethene	ug/L	0.51J	20	20	22.4	21.4	109	105	64-123	4	
Toluene	ug/L	1.0 U	20	20	21.1	20.1	105	100	70-130	5	
trans-1,2-Dichloroethene	ug/L	1.0 U	20	20	20.9	18.4	104	92	66-119	13	
trans-1,3-Dichloropropene	ug/L	1.0 U	20	20	18.8	17.7	94	88	52-117	6	
Trichloroethene	ug/L	1.0 U	20	20	21.4	19.5	107	98	63-125	9	
Vinyl chloride	ug/L	1.0 U	20	20	18.9	20.4	95	102	60-133	7	
1,2-Dichloroethane-d4 (S)	%.						98	93	80-120		
4-Bromofluorobenzene (S)	%.						102	97	78-122		
Dibromofluoromethane (S)	%.						103	97	80-120		
Toluene-d8 (S)	%.						99	99	80-120		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

QC Batch: 371493 Analysis Method: EPA 8015D
QC Batch Method: EPA 3510C Analysis Description: EPA 8015D TPH
Associated Lab Samples: 30335578001, 30335578002

METHOD BLANK: 1802691 Matrix: Water
Associated Lab Samples: 30335578001, 30335578002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH (C10-C28)	mg/L	ND	0.10	11/20/19 11:04	
o-Terphenyl (S)	%.	74	17-90	11/20/19 11:04	

LABORATORY CONTROL SAMPLE: 1802692

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH (C10-C28)	mg/L	1	0.83	83	43-107	
o-Terphenyl (S)	%.			79	17-90	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1802693 1802694

Parameter	Units	30335790001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH (C10-C28)	mg/L	0.13	0.98	0.98	0.66	0.84	53	72	26-112	24	
o-Terphenyl (S)	%.						58	77	17-90		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

QC Batch: 371492 Analysis Method: EPA 8081B
QC Batch Method: EPA 3510C Analysis Description: 8081A GCS Pesticides
Associated Lab Samples: 30335578001, 30335578002

METHOD BLANK: 1802688 Matrix: Water
Associated Lab Samples: 30335578001, 30335578002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.25	11/21/19 21:04	
Decachlorobiphenyl (S)	%.	78	10-129	11/21/19 21:04	
Tetrachloro-m-xylene (S)	%.	79	40-102	11/21/19 21:04	

LABORATORY CONTROL SAMPLE: 1802689

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlordane (Technical)	ug/L	2.5	1.9	77	47-112	
Decachlorobiphenyl (S)	%.			68	10-129	
Tetrachloro-m-xylene (S)	%.			76	40-102	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

QC Batch: 371491 Analysis Method: EPA 8082A
QC Batch Method: EPA 3510C Analysis Description: 8082A GCS PCB Mod
Associated Lab Samples: 30335578001, 30335578002

METHOD BLANK: 1802684 Matrix: Water
Associated Lab Samples: 30335578001, 30335578002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	ND	0.25	11/21/19 14:57	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1232 (Aroclor 1232)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1242 (Aroclor 1242)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1248 (Aroclor 1248)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1254 (Aroclor 1254)	ug/L	ND	0.25	11/21/19 14:57	CH
PCB-1260 (Aroclor 1260)	ug/L	ND	0.25	11/21/19 14:57	CH
Decachlorobiphenyl (S)	%.	87	10-120	11/21/19 14:57	
Tetrachloro-m-xylene (S)	%.	82	36-108	11/21/19 14:57	

LABORATORY CONTROL SAMPLE: 1802685

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	2.5	2.1	83	45-121	
PCB-1260 (Aroclor 1260)	ug/L	2.5	2.3	91	50-121	CH
Decachlorobiphenyl (S)	%.			63	10-120	
Tetrachloro-m-xylene (S)	%.			79	36-108	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1802686 1802687

Parameter	Units	30335183004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
PCB-1016 (Aroclor 1016)	ug/L	ND	2.4	2.5	5.9	5.7	242	232	27-137	3	D3,MH
PCB-1260 (Aroclor 1260)	ug/L	ND	2.4	2.5	71.7	60.5	2940	2460	18-139	17	CH,D3,E, MH
Decachlorobiphenyl (S)	%.						108	109	10-120		CH
Tetrachloro-m-xylene (S)	%.						86	87	36-108		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA	Pace Analytical Services - Greensburg

BATCH QUALIFIERS

Batch: 371492

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1c	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
2c	The result for AR1260 is reported from the DB-CLP2 column due to a high response on the DB-CLP1 column. The higher of the two results is reported.
CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
IU	The internal standard recoveries associated with this sample exceed the upper control limit. The reported results should be considered estimated values.
MH	Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.
S2	Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
SR	Surrogate recovery was below laboratory control limits. Results may be biased low.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PTTI (Building 20-25 Area)(Uni
Pace Project No.: 30335578

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30335578001	**MW-D16**	EPA 3510C	371493	EPA 8015D	371734
30335578002	**MW-S8**	EPA 3510C	371493	EPA 8015D	371734
30335578001	**MW-D16**	EPA 3510C	371492	EPA 8081B	371789
30335578002	**MW-S8**	EPA 3510C	371492	EPA 8081B	371789
30335578001	**MW-D16**	EPA 3510C	371491	EPA 8082A	371791
30335578002	**MW-S8**	EPA 3510C	371491	EPA 8082A	371791
30335578001	**MW-D16**	EPA 5030/8015B	371203		
30335578002	**MW-S8**	EPA 5030/8015B	371203		
30335578001	**MW-D16**	EPA 8260B	371926		
30335578002	**MW-S8**	EPA 8260B	371926		

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE — WO# : 30335578

Company: GES, Inc.	Billing Information: gesinvoices@gesonline.com
Address: 301 Commerce Park Drive, Cranberry Township, PA 16066	
Report To: Erin Letrick	Email To: GreatLakesRegion@gesonline.com
Copy To:	Site Collection Info/Address: PTTI 30 Curry Ave.
Customer Project Name/Number: PTTI (Building 20-25 Area)(Unit)	State: PA County/City: Washington/Canonsburg Time Zone Collected: [ ] PT [ ] MT [ ] CT [✓] ET
Phone: 800-267-2549 Email:	Site/Facility ID #: 0705598/40/871 Org #1407
Collected By (print): Addison Semar	Purchase Order #: Quote #: 11899-00
Collected By (signature): Addison Semar	Turnaround Date Required: Standard 10-day TAT
Sample Disposal: [✓] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: [ ] 5ame Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
	Compliance Monitoring? [ ] Yes [✓] No
	DW PWS ID #: DW Location Code:
	Immediately Packed on Ice: [✓] Yes [ ] No
	Field Filtered (if applicable): [ ] Yes [✓] No Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	TPH (GRO/DRO) (8015)	VOC 8260B	PCB (8082)	Chlordane (8081)							Lab Sample # / Comments:
MW-D16	GW	Grab			11-13-19	1050		4	X	X	X	X							001
MW-54	GW	Grab			11-13-19	1115		8	X	X	X	X							002

Container Preservative Type: U,3 | 3 | U | U

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles Intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples Received on Ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips: 1D2349			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

LAB USE ONLY:

Customer Remarks / Special Conditions / Possible Hazards: Please include results with PTTI (Building 20-25 Area) report

Type of Ice Used: Wet Blue Dry None

Packing Material Used: Bubble bags

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: NA

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:

Temp Blank Received: Y N NA

Therm ID#: IR 11

Cooler 1 Temp Upon Receipt: 3.9 °C

Cooler 1 Therm Corr. Factor: 0 °C

Cooler 1 Corrected Temp: 3.9 °C

Comments:

Relinquished by/Company: (Signature) Addison Semar / GES	Date/Time: 11-13-19 1515	Received by/Company: (Signature) Samples Receiving / GES	Date/Time: 11-13-19 1515
Relinquished by/Company: (Signature) Samples Receiving / GES	Date/Time:	Received by/Company: (Signature) Bill Graham	Date/Time: 11-14-19 1145
Relinquished by/Company: (Signature) Bill Graham 11-14-19 1730	Date/Time:	Received by/Company: (Signature) DRC	Date/Time: 11/14/1917

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 1

Appendix E – Chartiers Creek Laboratory Analytical Report – November 2019

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

November 21, 2019

GES Great Lakes Region
Groundwater & Environmental Services, Inc.
301 Commerce Park Drive
Cranberry Twp, PA 16066

RE: Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

Dear GES Lakes Region:
Enclosed are the analytical results for sample(s) received by the laboratory on November 14, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rachel Christner
rachel.christner@pacelabs.com
724-850-5611
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30335576001	**Upstream -1**	EPA 8015D	SEL	2	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335576002	**Upstream -2**	EPA 8015D	SEL	2	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335576003	**Downstream -1**	EPA 8015D	SEL	2	PASI-PA
		EPA 8082A	CWB	9	PASI-PA
		EPA 5030/8015B	MAK	2	PASI-PA
		EPA 8260B	KAC	39	PASI-PA
30335576004	**Trip Blank -1**	EPA 8260B	KAC	39	PASI-PA

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

Sample: Upstream -1 **Lab ID: 30335576001** Collected: 11/11/19 13:40 Received: 11/14/19 17:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D Preparation Method: EPA 3510C							
TPH (C10-C28)	ND	mg/L	0.099	1	11/17/19 15:17	11/18/19 15:51		1c
Surrogates								
o-Terphenyl (S)	66	%.	17-90	1	11/17/19 15:17	11/18/19 15:51	84-15-1	
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 13:23	12674-11-2	1c
PCB-1221 (Aroclor 1221)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 13:23	11104-28-2	1c
PCB-1232 (Aroclor 1232)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 13:23	11141-16-5	1c
PCB-1242 (Aroclor 1242)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 13:23	53469-21-9	1c
PCB-1248 (Aroclor 1248)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 13:23	12672-29-6	1c
PCB-1254 (Aroclor 1254)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 13:23	11097-69-1	1c
PCB-1260 (Aroclor 1260)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 13:23	11096-82-5	1c
Surrogates								
Tetrachloro-m-xylene (S)	65	%.	36-108	1	11/15/19 11:00	11/19/19 13:23	877-09-8	
Decachlorobiphenyl (S)	70	%.	10-120	1	11/15/19 11:00	11/19/19 13:23	2051-24-3	
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/15/19 20:19		
Surrogates								
4-Bromofluorobenzene (S)	95	%.	80-120	1		11/15/19 20:19	460-00-4	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/19/19 13:59	67-64-1	
Benzene	ND	ug/L	1.0	1		11/19/19 13:59	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/19/19 13:59	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/19/19 13:59	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/19/19 13:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/19/19 13:59	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/19/19 13:59	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/19/19 13:59	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/19/19 13:59	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/19/19 13:59	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/19/19 13:59	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/19/19 13:59	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/19/19 13:59	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/19/19 13:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/19/19 13:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/19/19 13:59	75-35-4	
cis-1,2-Dichloroethene	**1.1**	ug/L	1.0	1		11/19/19 13:59	156-59-2	B
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/19/19 13:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/19/19 13:59	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/19/19 13:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/19/19 13:59	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/19/19 13:59	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/19/19 13:59	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		11/19/19 13:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/19/19 13:59	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

Sample: Upstream -1 **Lab ID: 30335576001** Collected: 11/11/19 13:40 Received: 11/14/19 17:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
Styrene	ND	ug/L	1.0	1		11/19/19 13:59	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/19/19 13:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/19/19 13:59	127-18-4	
Toluene	ND	ug/L	1.0	1		11/19/19 13:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/19/19 13:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/19/19 13:59	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/19/19 13:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/19/19 13:59	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/19/19 13:59	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/19/19 13:59	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	103	%.	78-122	1		11/19/19 13:59	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%.	80-120	1		11/19/19 13:59	17060-07-0	
Toluene-d8 (S)	97	%.	80-120	1		11/19/19 13:59	2037-26-5	
Dibromofluoromethane (S)	100	%.	80-120	1		11/19/19 13:59	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

Sample: Upstream -2 **Lab ID: 30335576002** Collected: 11/11/19 14:00 Received: 11/14/19 17:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D Preparation Method: EPA 3510C							
TPH (C10-C28)	ND	mg/L	0.11	1	11/17/19 15:17	11/18/19 15:57		1c
Surrogates								
o-Terphenyl (S)	63	%.	17-90	1	11/17/19 15:17	11/18/19 15:57	84-15-1	
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 13:31	12674-11-2	1c
PCB-1221 (Aroclor 1221)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 13:31	11104-28-2	1c
PCB-1232 (Aroclor 1232)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 13:31	11141-16-5	1c
PCB-1242 (Aroclor 1242)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 13:31	53469-21-9	1c
PCB-1248 (Aroclor 1248)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 13:31	12672-29-6	1c
PCB-1254 (Aroclor 1254)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 13:31	11097-69-1	1c
PCB-1260 (Aroclor 1260)	ND	ug/L	0.25	1	11/15/19 11:00	11/19/19 13:31	11096-82-5	1c
Surrogates								
Tetrachloro-m-xylene (S)	68	%.	36-108	1	11/15/19 11:00	11/19/19 13:31	877-09-8	
Decachlorobiphenyl (S)	70	%.	10-120	1	11/15/19 11:00	11/19/19 13:31	2051-24-3	
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/15/19 20:38		
Surrogates								
4-Bromofluorobenzene (S)	95	%.	80-120	1		11/15/19 20:38	460-00-4	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/19/19 20:11	67-64-1	
Benzene	ND	ug/L	1.0	1		11/19/19 20:11	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/19/19 20:11	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/19/19 20:11	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/19/19 20:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/19/19 20:11	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/19/19 20:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/19/19 20:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/19/19 20:11	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/19/19 20:11	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/19/19 20:11	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/19/19 20:11	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/19/19 20:11	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/19/19 20:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/19/19 20:11	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/19/19 20:11	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/19/19 20:11	156-59-2	B
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/19/19 20:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/19/19 20:11	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/19/19 20:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/19/19 20:11	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/19/19 20:11	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/19/19 20:11	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		11/19/19 20:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/19/19 20:11	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

Sample: Upstream -2 **Lab ID: 30335576002** Collected: 11/11/19 14:00 Received: 11/14/19 17:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
Styrene	ND	ug/L	1.0	1		11/19/19 20:11	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/19/19 20:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/19/19 20:11	127-18-4	
Toluene	ND	ug/L	1.0	1		11/19/19 20:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/19/19 20:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/19/19 20:11	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/19/19 20:11	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/19/19 20:11	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/19/19 20:11	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/19/19 20:11	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	101	%.	78-122	1		11/19/19 20:11	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%.	80-120	1		11/19/19 20:11	17060-07-0	
Toluene-d8 (S)	97	%.	80-120	1		11/19/19 20:11	2037-26-5	
Dibromofluoromethane (S)	99	%.	80-120	1		11/19/19 20:11	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

Sample: Downstream -1 **Lab ID: 30335576003** Collected: 11/11/19 14:20 Received: 11/14/19 17:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015D TPH	Analytical Method: EPA 8015D Preparation Method: EPA 3510C							
TPH (C10-C28)	ND	mg/L	0.10	1	11/17/19 15:17	11/18/19 16:10		1c
Surrogates								
o-Terphenyl (S)	61	%.	17-90	1	11/17/19 15:17	11/18/19 16:10	84-15-1	
8082A GCS PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3510C							
PCB-1016 (Aroclor 1016)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 13:40	12674-11-2	1c
PCB-1221 (Aroclor 1221)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 13:40	11104-28-2	1c
PCB-1232 (Aroclor 1232)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 13:40	11141-16-5	1c
PCB-1242 (Aroclor 1242)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 13:40	53469-21-9	1c
PCB-1248 (Aroclor 1248)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 13:40	12672-29-6	1c
PCB-1254 (Aroclor 1254)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 13:40	11097-69-1	1c
PCB-1260 (Aroclor 1260)	ND	ug/L	0.26	1	11/15/19 11:00	11/19/19 13:40	11096-82-5	1c
Surrogates								
Tetrachloro-m-xylene (S)	60	%.	36-108	1	11/15/19 11:00	11/19/19 13:40	877-09-8	
Decachlorobiphenyl (S)	70	%.	10-120	1	11/15/19 11:00	11/19/19 13:40	2051-24-3	
Gasoline Range Organics	Analytical Method: EPA 5030/8015B							
TPH (C06-C10)	ND	ug/L	200	1		11/15/19 20:57		
Surrogates								
4-Bromofluorobenzene (S)	95	%.	80-120	1		11/15/19 20:57	460-00-4	
8260B MSV	Analytical Method: EPA 8260B							
Acetone	ND	ug/L	10.0	1		11/19/19 20:35	67-64-1	
Benzene	ND	ug/L	1.0	1		11/19/19 20:35	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/19/19 20:35	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/19/19 20:35	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/19/19 20:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/19/19 20:35	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/19/19 20:35	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/19/19 20:35	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/19/19 20:35	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/19/19 20:35	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/19/19 20:35	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/19/19 20:35	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/19/19 20:35	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/19/19 20:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/19/19 20:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/19/19 20:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/19/19 20:35	156-59-2	B
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/19/19 20:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/19/19 20:35	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/19/19 20:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/19/19 20:35	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/19/19 20:35	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/19/19 20:35	591-78-6	
Methylene Chloride	ND	ug/L	1.0	1		11/19/19 20:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/19/19 20:35	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

Sample: Downstream -1 **Lab ID: 30335576003** Collected: 11/11/19 14:20 Received: 11/14/19 17:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
Styrene	ND	ug/L	1.0	1		11/19/19 20:35	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/19/19 20:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/19/19 20:35	127-18-4	
Toluene	ND	ug/L	1.0	1		11/19/19 20:35	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/19/19 20:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/19/19 20:35	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/19/19 20:35	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/19/19 20:35	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/19/19 20:35	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/19/19 20:35	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	101	%.	78-122	1		11/19/19 20:35	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%.	80-120	1		11/19/19 20:35	17060-07-0	
Toluene-d8 (S)	95	%.	80-120	1		11/19/19 20:35	2037-26-5	
Dibromofluoromethane (S)	99	%.	80-120	1		11/19/19 20:35	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(724)850-5600

ANALYTICAL RESULTS

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

Sample: Trip Blank -1 **Lab ID: 30335576004** Collected: 11/11/19 00:00 Received: 11/14/19 17:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B							
Acetone	**13.0**	ug/L	10.0	1		11/19/19 14:48	67-64-1	
Benzene	ND	ug/L	1.0	1		11/19/19 14:48	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		11/19/19 14:48	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/19/19 14:48	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/19/19 14:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/19/19 14:48	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		11/19/19 14:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/19/19 14:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/19/19 14:48	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/19/19 14:48	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/19/19 14:48	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/19/19 14:48	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		11/19/19 14:48	124-48-1	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/19/19 14:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/19/19 14:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/19/19 14:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/19/19 14:48	156-59-2	B
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/19/19 14:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/19/19 14:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/19/19 14:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/19/19 14:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/19/19 14:48	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		11/19/19 14:48	591-78-6	
Methylene Chloride	**1.1**	ug/L	1.0	1		11/19/19 14:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/19/19 14:48	108-10-1	
Styrene	ND	ug/L	1.0	1		11/19/19 14:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/19/19 14:48	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/19/19 14:48	127-18-4	
Toluene	ND	ug/L	1.0	1		11/19/19 14:48	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/19/19 14:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/19/19 14:48	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/19/19 14:48	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		11/19/19 14:48	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		11/19/19 14:48	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		11/19/19 14:48	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	98	%.	78-122	1		11/19/19 14:48	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%.	80-120	1		11/19/19 14:48	17060-07-0	
Toluene-d8 (S)	95	%.	80-120	1		11/19/19 14:48	2037-26-5	
Dibromofluoromethane (S)	99	%.	80-120	1		11/19/19 14:48	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

QC Batch: 371203 Analysis Method: EPA 5030/8015B
QC Batch Method: EPA 5030/8015B Analysis Description: Gasoline Range Organics
Associated Lab Samples: 30335576001, 30335576002, 30335576003

METHOD BLANK: 1801114 Matrix: Water
Associated Lab Samples: 30335576001, 30335576002, 30335576003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH (C06-C10)	ug/L	ND	200	11/15/19 18:26	
4-Bromofluorobenzene (S)	%.	95	80-120	11/15/19 18:26	

LABORATORY CONTROL SAMPLE: 1801115

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH (C06-C10)	ug/L	1000	791	79	66-129	
4-Bromofluorobenzene (S)	%.			97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1801116 1801117

Parameter	Units	30335167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
TPH (C06-C10)	ug/L	ND	1000	1000	853	899	84	89	51-126	5	
4-Bromofluorobenzene (S)	%.						99	100	80-120		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

QC Batch: 371699 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV
Associated Lab Samples: 30335576001, 30335576002, 30335576003, 30335576004

METHOD BLANK: 1803514 Matrix: Water
Associated Lab Samples: 30335576001, 30335576002, 30335576003, 30335576004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	11/19/19 13:34	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/19/19 13:34	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/19/19 13:34	
1,1-Dichloroethane	ug/L	ND	1.0	11/19/19 13:34	
1,1-Dichloroethene	ug/L	ND	1.0	11/19/19 13:34	
1,2-Dichloroethane	ug/L	ND	1.0	11/19/19 13:34	
1,2-Dichloropropane	ug/L	ND	1.0	11/19/19 13:34	
2-Butanone (MEK)	ug/L	ND	10.0	11/19/19 13:34	
2-Hexanone	ug/L	ND	10.0	11/19/19 13:34	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	11/19/19 13:34	
Acetone	ug/L	ND	10.0	11/19/19 13:34	
Benzene	ug/L	ND	1.0	11/19/19 13:34	
Bromodichloromethane	ug/L	ND	1.0	11/19/19 13:34	
Bromoform	ug/L	ND	1.0	11/19/19 13:34	
Bromomethane	ug/L	ND	1.0	11/19/19 13:34	
Carbon disulfide	ug/L	ND	1.0	11/19/19 13:34	
Carbon tetrachloride	ug/L	ND	1.0	11/19/19 13:34	
Chlorobenzene	ug/L	ND	1.0	11/19/19 13:34	
Chloroethane	ug/L	ND	1.0	11/19/19 13:34	
Chloroform	ug/L	ND	1.0	11/19/19 13:34	
Chloromethane	ug/L	ND	1.0	11/19/19 13:34	
cis-1,2-Dichloroethene	ug/L	1.1	1.0	11/19/19 13:34	B
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/19/19 13:34	
Dibromochloromethane	ug/L	ND	1.0	11/19/19 13:34	
Ethylbenzene	ug/L	ND	1.0	11/19/19 13:34	
m&p-Xylene	ug/L	ND	2.0	11/19/19 13:34	
Methylene Chloride	ug/L	ND	1.0	11/19/19 13:34	
o-Xylene	ug/L	ND	1.0	11/19/19 13:34	
Styrene	ug/L	ND	1.0	11/19/19 13:34	
Tetrachloroethene	ug/L	ND	1.0	11/19/19 13:34	
Toluene	ug/L	ND	1.0	11/19/19 13:34	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/19/19 13:34	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/19/19 13:34	
Trichloroethene	ug/L	ND	1.0	11/19/19 13:34	
Vinyl chloride	ug/L	ND	1.0	11/19/19 13:34	
1,2-Dichloroethane-d4 (S)	%.	97	80-120	11/19/19 13:34	
4-Bromofluorobenzene (S)	%.	102	78-122	11/19/19 13:34	
Dibromofluoromethane (S)	%.	103	80-120	11/19/19 13:34	
Toluene-d8 (S)	%.	97	80-120	11/19/19 13:34	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

LABORATORY CONTROL SAMPLE: 1803515

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.5	108	70-130	
1,1,2,2-Tetrachloroethane	ug/L	20	18.8	94	70-130	
1,1,2-Trichloroethane	ug/L	20	19.5	98	70-130	
1,1-Dichloroethane	ug/L	20	20.2	101	68-121	
1,1-Dichloroethene	ug/L	20	18.0	90	63-129	
1,2-Dichloroethane	ug/L	20	19.3	97	67-117	
1,2-Dichloropropane	ug/L	20	19.4	97	69-121	
2-Butanone (MEK)	ug/L	20	17.8	89	59-128	
2-Hexanone	ug/L	20	19.2	96	49-145	
4-Methyl-2-pentanone (MIBK)	ug/L	20	19.5	97	63-126	
Acetone	ug/L	20	22.8	114	37-150	
Benzene	ug/L	20	19.7	99	70-130	
Bromodichloromethane	ug/L	20	19.4	97	70-130	
Bromoform	ug/L	20	18.0	90	65-130	
Bromomethane	ug/L	20	19.9	99	45-148	
Carbon disulfide	ug/L	20	21.1	106	55-123	
Carbon tetrachloride	ug/L	20	18.8	94	69-126	
Chlorobenzene	ug/L	20	20.5	103	70-130	
Chloroethane	ug/L	20	20.9	104	68-146	
Chloroform	ug/L	20	19.4	97	69-116	
Chloromethane	ug/L	20	22.5	112	56-129	
cis-1,2-Dichloroethene	ug/L	20	20.4	102	66-118	B
cis-1,3-Dichloropropene	ug/L	20	19.0	95	70-130	
Dibromochloromethane	ug/L	20	18.7	93	70-130	
Ethylbenzene	ug/L	20	20.2	101	70-130	
m&p-Xylene	ug/L	40	40.5	101	70-130	
Methylene Chloride	ug/L	20	17.7	88	65-124	
o-Xylene	ug/L	20	19.4	97	70-130	
Styrene	ug/L	20	20.1	101	70-130	
Tetrachloroethene	ug/L	20	20.4	102	70-130	
Toluene	ug/L	20	19.3	96	70-130	
trans-1,2-Dichloroethene	ug/L	20	19.5	98	64-123	
trans-1,3-Dichloropropene	ug/L	20	19.5	98	68-119	
Trichloroethene	ug/L	20	19.6	98	70-130	
Vinyl chloride	ug/L	20	21.9	110	70-130	
1,2-Dichloroethane-d4 (S)	%.			98	80-120	
4-Bromofluorobenzene (S)	%.			99	78-122	
Dibromofluoromethane (S)	%.			99	80-120	
Toluene-d8 (S)	%.			98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1803516 1803517

Parameter	Units	30335576001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	21.7	22.8	109	114	67-127	5	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1803516 1803517

Parameter	Units	30335576001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	19.1	19.3	96	96	55-118	1	
1,1,2-Trichloroethane	ug/L	ND	20	20	19.6	20.2	98	101	60-117	3	
1,1-Dichloroethane	ug/L	ND	20	20	18.8	19.5	94	98	68-118	4	
1,1-Dichloroethene	ug/L	ND	20	20	19.4	18.6	97	93	62-126	4	
1,2-Dichloroethane	ug/L	ND	20	20	18.7	19.5	94	98	67-117	4	
1,2-Dichloropropane	ug/L	ND	20	20	19.3	20.4	96	102	61-128	5	
2-Butanone (MEK)	ug/L	ND	20	20	16.3	19.0	77	90	63-175	15	
2-Hexanone	ug/L	ND	20	20	15.6	19.4	78	97	65-151	21	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	20	20	15.8	20.7	79	103	66-149	27	
Acetone	ug/L	ND	20	20	23.1	24.7	91	99	10-175	7	
Benzene	ug/L	ND	20	20	19.5	20.7	98	103	67-119	6	
Bromodichloromethane	ug/L	ND	20	20	18.8	20.0	94	100	67-126	6	
Bromoform	ug/L	ND	20	20	16.7	16.9	84	84	43-114	1	
Bromomethane	ug/L	ND	20	20	18.7	17.7	94	88	10-164	6	
Carbon disulfide	ug/L	ND	20	20	16.9	19.1	84	95	37-135	12	
Carbon tetrachloride	ug/L	ND	20	20	18.7	19.1	94	96	60-137	2	
Chlorobenzene	ug/L	ND	20	20	20.8	21.2	102	104	68-119	2	
Chloroethane	ug/L	ND	20	20	21.1	23.1	105	115	54-169	9	
Chloroform	ug/L	ND	20	20	19.2	20.0	93	97	69-113	4	
Chloromethane	ug/L	ND	20	20	22.5	23.0	112	115	43-159	2	
cis-1,2-Dichloroethene	ug/L	1.1	20	20	18.8	17.9	89	84	65-121	5	B
cis-1,3-Dichloropropene	ug/L	ND	20	20	18.3	19.3	92	97	61-120	5	
Dibromochloromethane	ug/L	ND	20	20	17.9	18.1	89	89	56-121	1	
Ethylbenzene	ug/L	ND	20	20	20.3	21.0	101	105	69-127	4	
m&p-Xylene	ug/L	ND	40	40	41.4	43.3	103	108	70-129	5	
Methylene Chloride	ug/L	ND	20	20	17.3	17.3	86	87	49-144	0	
o-Xylene	ug/L	ND	20	20	19.8	20.5	99	102	68-126	3	
Styrene	ug/L	ND	20	20	20.3	20.8	102	104	65-120	3	
Tetrachloroethene	ug/L	ND	20	20	21.4	21.4	107	107	64-123	0	
Toluene	ug/L	ND	20	20	19.7	20.3	98	101	70-130	3	
trans-1,2-Dichloroethene	ug/L	ND	20	20	19.5	20.4	98	102	66-119	4	
trans-1,3-Dichloropropene	ug/L	ND	20	20	18.7	19.4	94	97	52-117	3	
Trichloroethene	ug/L	ND	20	20	21.3	21.5	106	107	63-125	1	
Vinyl chloride	ug/L	ND	20	20	22.2	23.1	111	115	60-133	4	
1,2-Dichloroethane-d4 (S)	%.						94	97	80-120		
4-Bromofluorobenzene (S)	%.						101	101	78-122		
Dibromofluoromethane (S)	%.						98	102	80-120		
Toluene-d8 (S)	%.						96	97	80-120		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

QC Batch: 371183 Analysis Method: EPA 8015D
QC Batch Method: EPA 3510C Analysis Description: EPA 8015D TPH
Associated Lab Samples: 30335576001, 30335576002, 30335576003

METHOD BLANK: 1801091 Matrix: Water
Associated Lab Samples: 30335576001, 30335576002, 30335576003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH (C10-C28)	mg/L	ND	0.10	11/18/19 15:19	
o-Terphenyl (S)	%.	61	17-90	11/18/19 15:19	

LABORATORY CONTROL SAMPLE: 1801092

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH (C10-C28)	mg/L	1	0.87	87	43-107	
o-Terphenyl (S)	%.			84	17-90	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

QC Batch: 371180 Analysis Method: EPA 8082A
QC Batch Method: EPA 3510C Analysis Description: 8082A GCS PCB Mod
Associated Lab Samples: 30335576001, 30335576002, 30335576003

METHOD BLANK: 1801085 Matrix: Water
Associated Lab Samples: 30335576001, 30335576002, 30335576003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	ND	0.25	11/19/19 13:06	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.25	11/19/19 13:06	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.25	11/19/19 13:06	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.25	11/19/19 13:06	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.25	11/19/19 13:06	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.25	11/19/19 13:06	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.25	11/19/19 13:06	
Decachlorobiphenyl (S)	%.	74	10-120	11/19/19 13:06	
Tetrachloro-m-xylene (S)	%.	76	36-108	11/19/19 13:06	

LABORATORY CONTROL SAMPLE: 1801086

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	2.5	1.9	75	45-121	
PCB-1260 (Aroclor 1260)	ug/L	2.5	1.8	73	50-121	
Decachlorobiphenyl (S)	%.			46	10-120	
Tetrachloro-m-xylene (S)	%.			76	36-108	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA	Pace Analytical Services - Greensburg

BATCH QUALIFIERS

Batch: 371180

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 371183

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1c	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
B	Analyte was detected in the associated method blank.

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PTTI (Chartiers Creek)
Pace Project No.: 30335576

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30335576001	**Upstream -1**	EPA 3510C	371183	EPA 8015D	371377
30335576002	**Upstream -2**	EPA 3510C	371183	EPA 8015D	371377
30335576003	**Downstream -1**	EPA 3510C	371183	EPA 8015D	371377
30335576001	**Upstream -1**	EPA 3510C	371180	EPA 8082A	371288
30335576002	**Upstream -2**	EPA 3510C	371180	EPA 8082A	371288
30335576003	**Downstream -1**	EPA 3510C	371180	EPA 8082A	371288
30335576001	**Upstream -1**	EPA 5030/8015B	371203		
30335576002	**Upstream -2**	EPA 5030/8015B	371203		
30335576003	**Downstream -1**	EPA 5030/8015B	371203		
30335576001	**Upstream -1**	EPA 8260B	371699		
30335576002	**Upstream -2**	EPA 8260B	371699		
30335576003	**Downstream -1**	EPA 8260B	371699		
30335576004	**Trip Blank -1**	EPA 8260B	371699		

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

WO# : 30335576

30335576

LAB USE ... ber or

Company: GES, Inc.	Billing Information: gesinvoices@gesonline.com
Address: 301 Commerce Park Drive, Cranberry Township, PA 16066	
Report To: Erin Letrick	Email To: GreatLakesRegion@gesonline.com
Copy To:	Site Collection Info/Address: PTTI 30 Curry Ave.
Customer Project Name/Number: PTTI (Chartiers Creek)	State: PA County/City: /Washington/Canonsburg Time Zone Collected: [ ] PT [ ] MT [ ] CT [✓] ET
Phone: 800-267-2549 Email:	Site/Facility ID #: 0705598/62/882 Org #1407
Collected By (print): Addison Serran	Purchase Order #: Quote #: 11899-00
Collected By (signature): Addison Serran	Turnaround Date Required: Standard 10-day TAT
Sample Disposal: [✓] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Compliance Monitoring? [ ] Yes [✓] No

DW PWS ID #: DW Location Code:

Immediately Packed on Ice: [✓] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [✓] No

Analysis: _____

* Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	TPH (GRO/DRO) (8015)	VOC 8260B	PCB (8082)	Lab # / Comments
Upstream - 1	GW	Grab			11-11-19	1340		7	X	X	X	001
Upstream - 2						1400		7	X	X	X	002
Downstream - 1						1420		7	X	X	X	003
Trip Blank - 1						0000		2		X		004

Container / Preservative Type

U,3	3	U								

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles Intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples Received on Ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips: 160390			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

LAB USE ONLY:
Lab Sample # / Comments:

DJB 11/14/19

DJB 11/14/19

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used: Bubble Bags

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: NA

Samples received via: FEDEX UPS Client Courier Pace Courier

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Lab Sample Temperature Info:

Temp Blank Received: Y N NA

Therm ID#: 11

Cooler 1 Temp Upon Receipt: 1.4 / 3.4 °C

Cooler 1 Therm Corr. Factor: 0 °C

Cooler 1 Corrected Temp: 1.4 / 3.6

Comments:

DJB 11/14/19

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 1

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Addison Serran / GES	11-13-19/1515	Samples Receiving / GES	11-13-19/1515
Samples Receiving / GES		[signature]	11-14-19 1145
[signature] 11-14-19 1730		[signature] DJB	11/14/19 1723

Page 1 of 1 20

Pace Analytical
www.pacelabs.com

Sample Receiving Non-Conformance Form (NCF)

Date: 11/14/19	Evaluated by: CWB
Client: GES	

WO# : 30335576

PM: RDC Due Date: 12/03/19

CLIENT: GES W PA

1. If Chain-of-Custody (COC) is not received: contact client and if necessary, fill out a COC and indicate that it was filled out by lab personnel. Note issues on this NCF.

2. If COC is incomplete, check applicable issues below and add details where appropriate:

☐ Collection date/time missing or incorrect	☐ Analyses or analytes: missing or clarification needed	☐ Samples listed on COC do not match samples received (missing, additional, etc.)
☐ Sample IDs on COC do not match sample labels	☐ Required trip blanks were not received	☐ Required signatures are missing

Comments/Details/Other Issues not listed above:

3. Sample integrity issues: check applicable issues below and add details where appropriate:

☐ Samples: Past holding time	☐ Samples: Condition needs to be brought to lab personnel's attention (details below)	☐ Preservation: Improper
☐ Samples: Not field filtered	☐ Containers: Broken or compromised	☐ Temperature: not within acceptance criteria (typically 0-6C)
☐ Samples: Insufficient volume received	☐ Containers: Incorrect	☐ Temperature: Samples arrived frozen
☐ Samples: Cooler damaged or compromised	☐ Custody Seals: Missing or compromised on samples, trip blanks or coolers	☑ Vials received with improper headspace
☐ Samples: contain chlorine or sulfides	☐ Packing Material: Insufficient/Improper	☐ Other:

Comments/Details:

Both Trip Blanks

4. If Samples not preserved properly and Sample Receiving adjusts pH, add details below:

Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:
Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:
Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:

5. Client Contact: If client is contacted for any issue listed above, fill in details below:

Client:	Contacted per:	
PM Initials:	Date/Time:	

Client Comments/Instructions: