



# ARM Group LLC

Engineers and Scientists

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December 9, 2021

Ms. Barbara Brown  
Project Coordinator  
Maryland Department of the Environment  
1800 Washington Boulevard  
Baltimore, MD 21230

Re: Former Coke Oven Area (Parcel B10)  
Northeast Delineation Letter Report  
Tradepoint Atlantic  
Sparrows Point, MD 21219

Dear Ms. Brown:

On behalf of Tradepoint Atlantic (TPA), ARM Group LLC (ARM) is pleased to provide this letter to document the results from the recent Northeast Delineation conducted at the former Coke Oven Area (COA) – Parcel B10 (the Site) of the Tradepoint Atlantic property located in Sparrows Point, Maryland. The Northeast Delineation was requested by the Maryland Department of the Environment (MDE) in a Comment Response Letter (dated February 23, 2021) related to the Coke Point Area Corrective Measures Study Investigation Report (CPA CMS) Revision 2 (updated on February 23, 2021) to delineate groundwater contamination in the vicinity of groundwater monitoring locations CO05-PZM006, CO08-PZM005, CO08-PZM036, and CO212-MWS.

## **Delineation Scope**

Based on the benzene and naphthalene isoconcentration maps developed for the shallow and intermediate zones as part of the CPA CMS, additional locations requiring delineation were identified. Specifically, three locations (CO05-PZM006, CO08-PZM005, and CO212-MWS) were identified in the shallow groundwater zone as requiring additional delineation, while one location (CO08-PZM036) was identified in the intermediate zone as requiring additional delineation. **Figure 1** and **Figure 2** displays the location of these four monitoring wells. The concentration of benzene and naphthalene, as well as the date of last sample, for each of these wells are included in the table below:

Well ID	Benzene Concentration (ug/L)	Naphthalene Concentration (ug/L)
CO05-PZM006 (6/10/2015)	1,850	5,750
CO08-PZM005 (6/10/2015)	15,000	1,020
CO08-PZM036 (6/11/2015)	35,300	6,390
CO212-MWS (2/6/2020)	10,600	19,000

The CPA CMS suggested that the elevated benzene concentrations that were observed in the shallow zone at CO08-PZM005 and CO212-MWS may be indicative of an isolated local source in the immediate vicinity. Similar to the elevated benzene observed in the shallow zone well CO08-PZM005, elevated benzene was also observed in the adjacent intermediate zone well CO08-PZM036, further suggesting that an isolated impact at this location is associated with a local source.

The CPA CMS stated that the highest detection of naphthalene in the Coke Oven Area (COA) and Parcel B11 shallow wells was observed in CO212-MWS (19,000 ug/L). The CPA CMS suggested that the elevated naphthalene in CO212-MWS indicated a potential isolated local source of groundwater contamination in the vicinity of CO08-PZM005 and CO212-MWS. Additionally, elevated naphthalene concentrations were observed in the adjacent intermediate zone well CO08-PZM036, which further suggests an isolated local impact that is related to the naphthalene impacts associated in the vicinity of the shallow zone wells CO08-PZM005 and CO212-MWS.

As part of the Comment Response Letter (dated February 23, 2021) a groundwater delineation work plan was submitted to the MDE which proposed the installation of:

- four delineation monitoring wells surrounding the shallow zone groundwater well CO05-PZM006 (CO05A-PZM, CO05B-PZM, CO05C-PZM, and CO05D-PZM),
- four delineation monitoring wells surrounding the shallow zone groundwater wells CO08-PZM005 and CO212-MWS (CO08A-PZM, CO08B-PZM, CO212A-PZM, and CO212B-PZM), and,
- two delineation monitoring wells surrounding the intermediate zone groundwater well CO08-PZM036 (CO08C-PZM and CO08D-PZM).

The location of the delineation monitoring wells are shown on **Figure 1** and **Figure 2**.

### **Field Work**

In April 2021, ARM installed the monitoring wells for the Northeast Delineation in accordance with the approved Work Plan that was proposed in the CPA CMS Comment Response Letter utilizing the Terra Sonic International: TSi 150CC Sonic Drill Rig. During the installation of each monitoring well, soil types were logged and screened with a hand-held photoionization detector



(PID). The soil boring and monitoring well construction logs have been included in **Attachment 1**.

ARM personnel completed low flow groundwater sampling for this delineation area on May 19 and 20, 2021, in accordance with the **Field Standard Operating Procedure (SOP) Numbers 006 and 007** as provided in Appendix A of the Quality Assurance Project Plan (QAPP). A groundwater sample was collected from each location if the monitoring well was absent of significant non-aqueous phase liquid (NAPL). Groundwater samples were collected at each location using laboratory supplied sample containers and preservatives, a peristaltic pump, dedicated sample tubing, and a water quality multiparameter meter with a flow-through cell. Calibration of the multiparameter meter was performed before the start of each day of the sampling event. Documentation of the multiparameter meter calibration, in addition to the groundwater purge logs, are included in **Attachment 2**. Groundwater samples were submitted to Pace Analytical Services Inc. (PACE) to be analyzed for Target Compound List (TCL) Volatile Organic Compounds (VOCs) via USEPA Method 8260 and TCL polynuclear aromatic hydrocarbons (PAHs) via USEPA Method 8270 SIM. Laboratory reports are included in **Attachment 3**.

## **Results**

**Table 1** and **Table 2** present a summary of benzene and naphthalene concentrations in shallow and intermediate groundwater, respectively. The tables include the most recent groundwater sampling results for each location. **Figure 1** and **Figure 2** illustrate the groundwater Project Action Limit (PAL) exceedances for the most recent sampling results for the shallow and intermediate zones, respectively. Groundwater samples were not collected from monitoring well CO05D-PZM and CO212B-PZM due to the presence of non-aqueous phase liquid (NAPL). Since the installation activities, four delineation monitoring wells (CO05B-PZM, CO05D-PZM, CO08A-PZM, and CO212B-MWS) have had trace or measurable NAPL. The NAPL gauging data for these four locations is provided on **Table 3**. While the boring log for CO05D-PZM noted a ‘possible void’ from 17-23 feet below ground surface, no additional sand was needed during placement of the well’s filter pack (when compared with other locations), indicating that if there was a void, it was not extensive. CO05D-PZM has been proposed for transmissivity testing as part of the *Site-wide NAPL Transmissivity Work Plan* (dated September 1, 2021).

Data that were used to develop isoconcentration figures for benzene and naphthalene included:

- the recent groundwater results from the Northeast Delineation (completed May 2021),
- Coke Oven Area quarterly sampling (completed in the first half of 2021),
- the Coke Point Landfill semi-annual sampling (completed in the first half of 2021)
- the most recent groundwater sampling results from all groundwater locations within the vicinity of the Northeast Delineation; and
- the monitoring wells completed as part of this program.

The following figures display the groundwater isoconcentration results from the Northeast Delineation study area.

- **Figure 3** (shallow zone benzene concentrations),



- **Figure 4** (shallow zone naphthalene concentrations),
- **Figure 5** (intermediate zone benzene concentrations), and
- **Figure 6** (intermediate zone naphthalene concentrations)

It appears that elevated concentrations of benzene in the shallow zone are isolated between CO08-PZM005, CO212-MWS, and CO212B-PZM (with NAPL detected), as well as, CO05-PZM006, CO05A-PZM, CO05B-PZM, and CO05D-PZM (**Figure 3**). Elevated concentrations of naphthalene in the shallow zone appear to be isolated at CO212-MWS and CO212B-PZM (with NAPL detected), as well as defined between CO05A-PZM, CO05B-PZM, and CO05D-PZM (**Figure 4**). It appears that both elevated concentrations of benzene and naphthalene in the intermediate zone are confined to CO08-PZM036 (**Figure 5** and **Figure 6**).

### Summary

Based on the NAPL gauging data and the Northeast Delineation groundwater results, it appears that the benzene and naphthalene concentrations in the shallow and intermediate zones has been largely characterized in these areas. However, several areas may require additional delineation. Additional delineation wells will be proposed as part of the CPA Combined Delineation Work Plan, which will be submitted to the regulators before the end of the year. This data will be incorporated into the site wide groundwater corrective measures study that is currently being developed for the property.

If you have questions regarding any information covered in this document, please feel free to contact Peter Haid at Tradepoint Atlantic: 443-649-5055.

Respectfully Submitted,  
ARM Group LLC



Kaye Guille, P.E., PMP  
Staff Geologist



T. Neil Peters, P.E.  
Senior Vice President



Attachments:

Figure 1: Shallow Zone Delineation Groundwater PAL Exceedances

Figure 2: Intermediate Zone Delineation Groundwater PAL Exceedances

Figure 3: Shallow Zone Groundwater Benzene Concentrations

Figure 4: Shallow Zone Groundwater Naphthalene Concentrations

Figure 5: Intermediate Zone Groundwater Benzene Concentrations

Figure 6: Intermediate Zone Groundwater Naphthalene Concentrations

Table 1: Summary of Benzene and Naphthalene Detected in Shallow Groundwater

Table 2: Summary of Benzene and Naphthalene Detected in Intermediate Groundwater

Table 3: NAPL Gauging Activities

Attachment 1: Boring and Monitoring Well Construction Logs

Attachment 2: Field Forms

Attachment 3: Laboratory Reports



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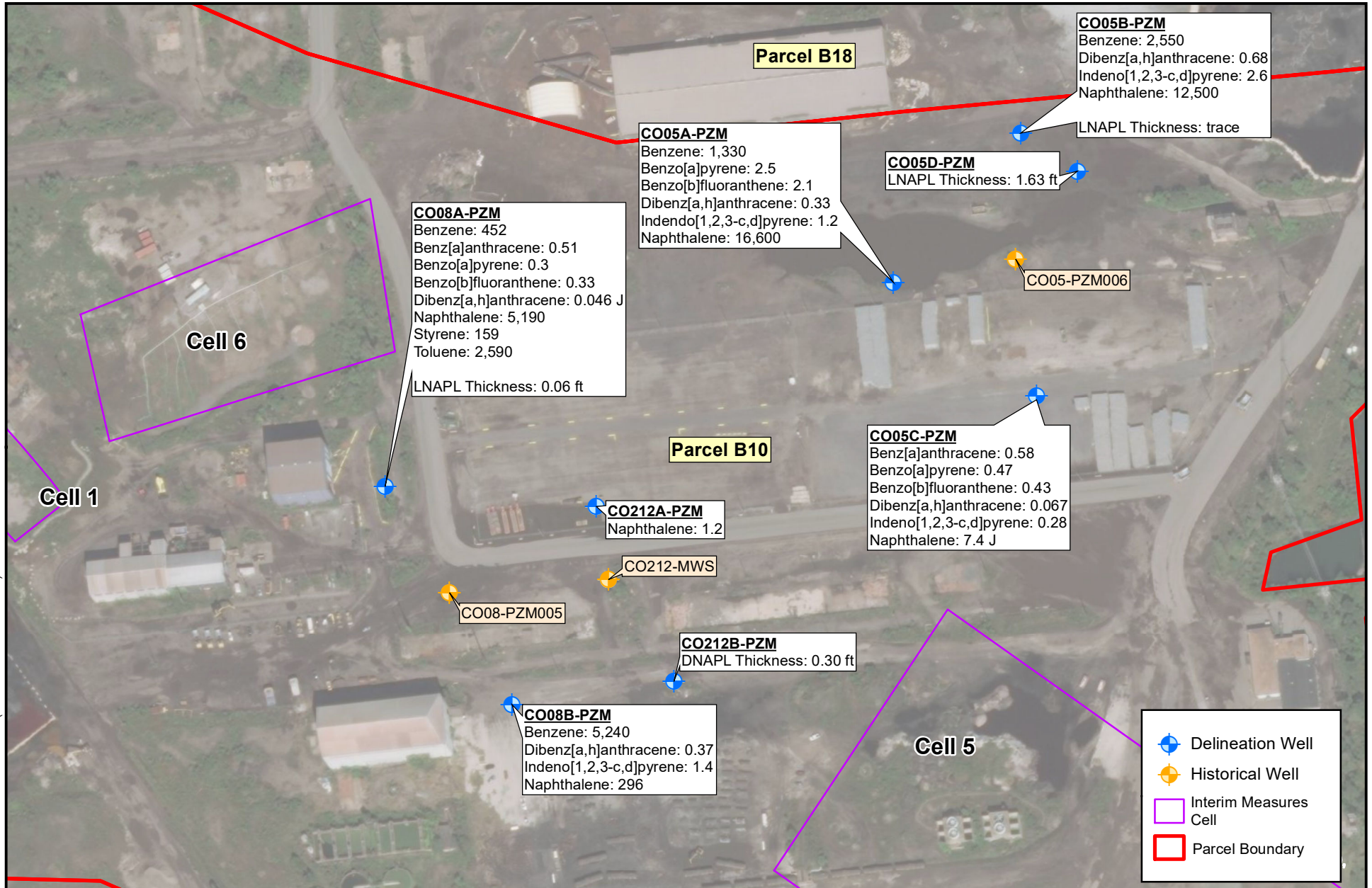
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## **FIGURES**

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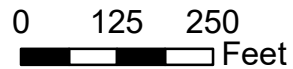
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Sparrows Point, Maryland



Coke Oven Area - Shallow Zone  
Delineation Groundwater PAL Exceedances (ug/L)

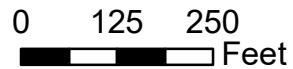
Date: 7/14/2021

**Figure 1**



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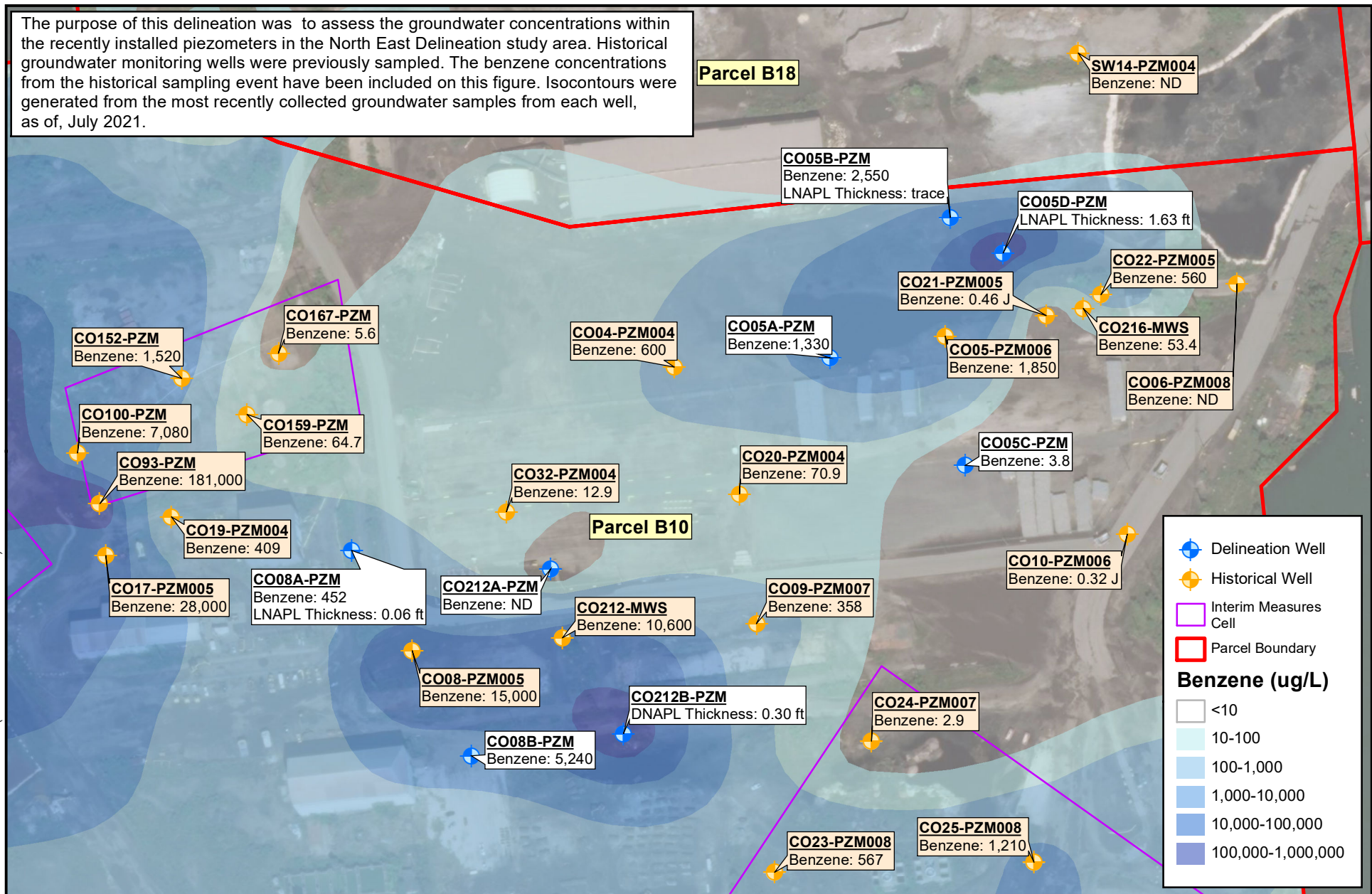
Coke Oven Area - Intermediate Zone  
Delineation Groundwater PAL Exceedances (ug/L)

Date: 7/14/2021

**Figure**  
**2**



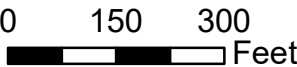
The purpose of this delineation was to assess the groundwater concentrations within the recently installed piezometers in the North East Delineation study area. Historical groundwater monitoring wells were previously sampled. The benzene concentrations from the historical sampling event have been included on this figure. Isocontours were generated from the most recently collected groundwater samples from each well, as of, July 2021.



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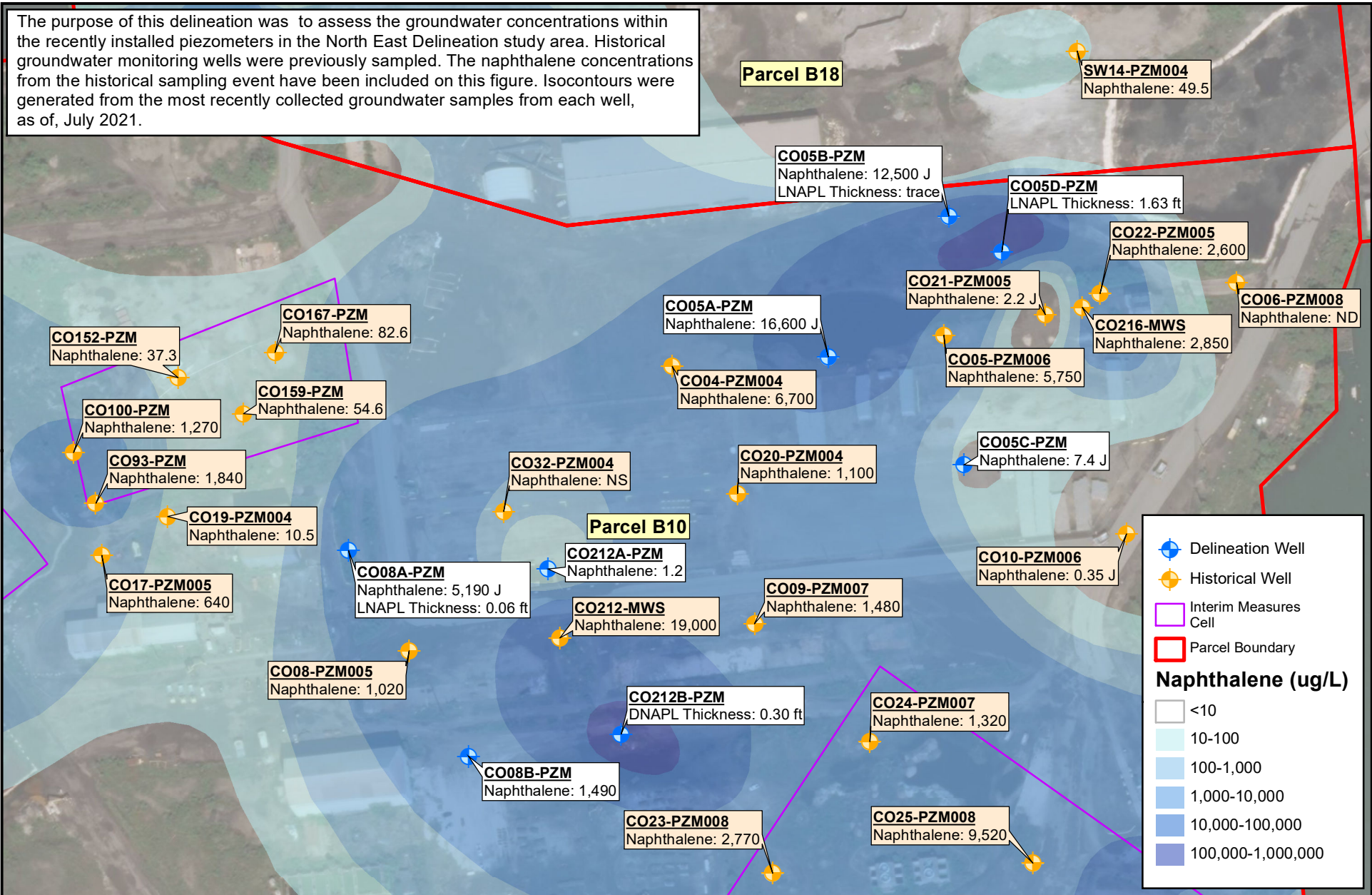
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**Coke Oven Area - Shallow Zone**  
**Groundwater Benzene Concentrations (ug/L)**  
**Benzene Isocontours (July 2021)**  
 Date: 10/12/2021

**Figure 3**

The purpose of this delineation was to assess the groundwater concentrations within the recently installed piezometers in the North East Delineation study area. Historical groundwater monitoring wells were previously sampled. The naphthalene concentrations from the historical sampling event have been included on this figure. Isocontours were generated from the most recently collected groundwater samples from each well, as of, July 2021.



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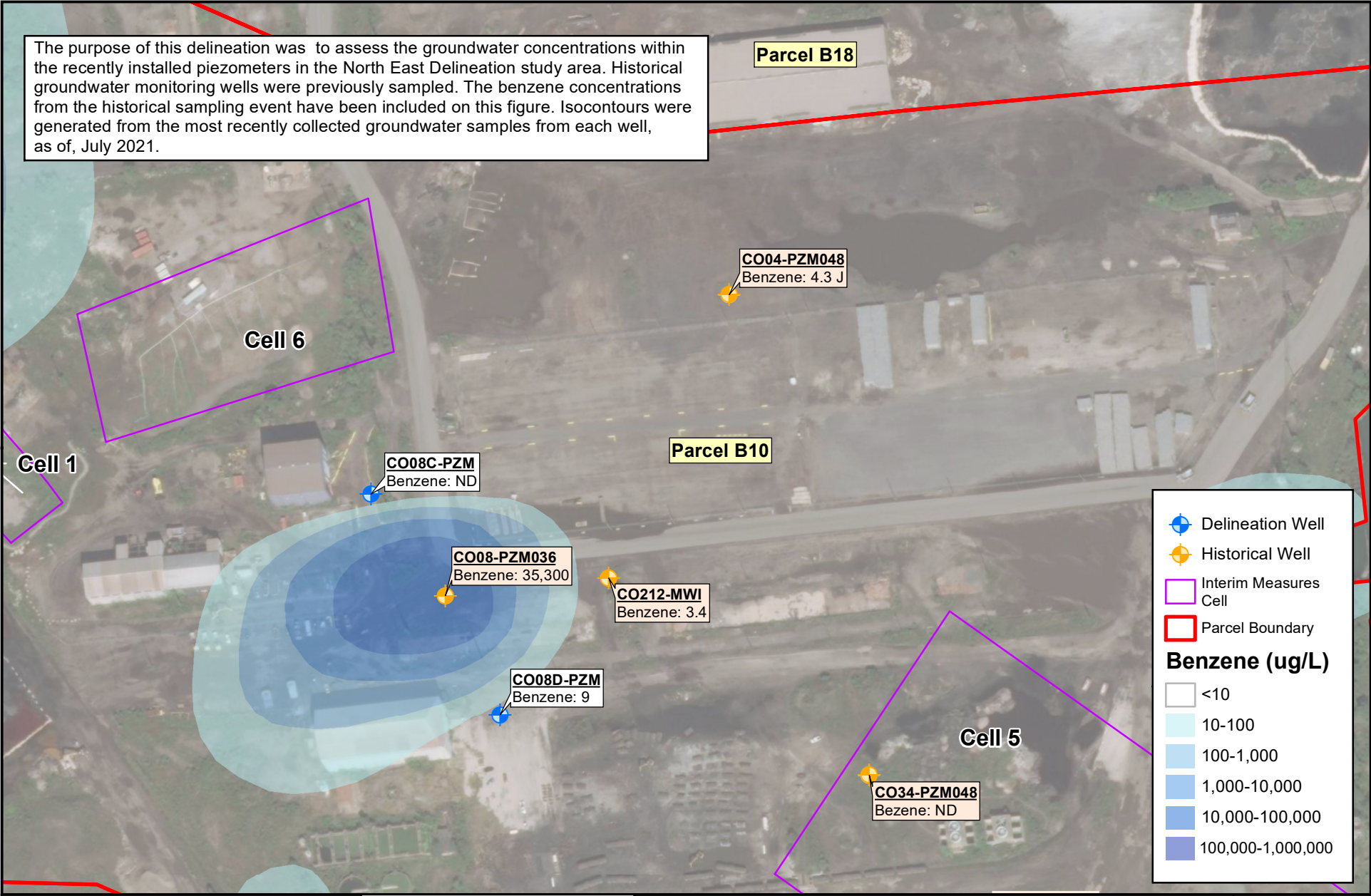
0 150 300  
Feet

Coke Oven Area - Shallow Zone  
Groundwater Naphthalene Concentrations (ug/L)  
Naphthalene Isocontours (July 2021)  
Date: 10/12/2021

**Figure 4**



The purpose of this delineation was to assess the groundwater concentrations within the recently installed piezometers in the North East Delineation study area. Historical groundwater monitoring wells were previously sampled. The benzene concentrations from the historical sampling event have been included on this figure. Isocontours were generated from the most recently collected groundwater samples from each well, as of, July 2021.

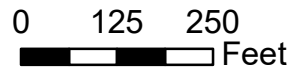


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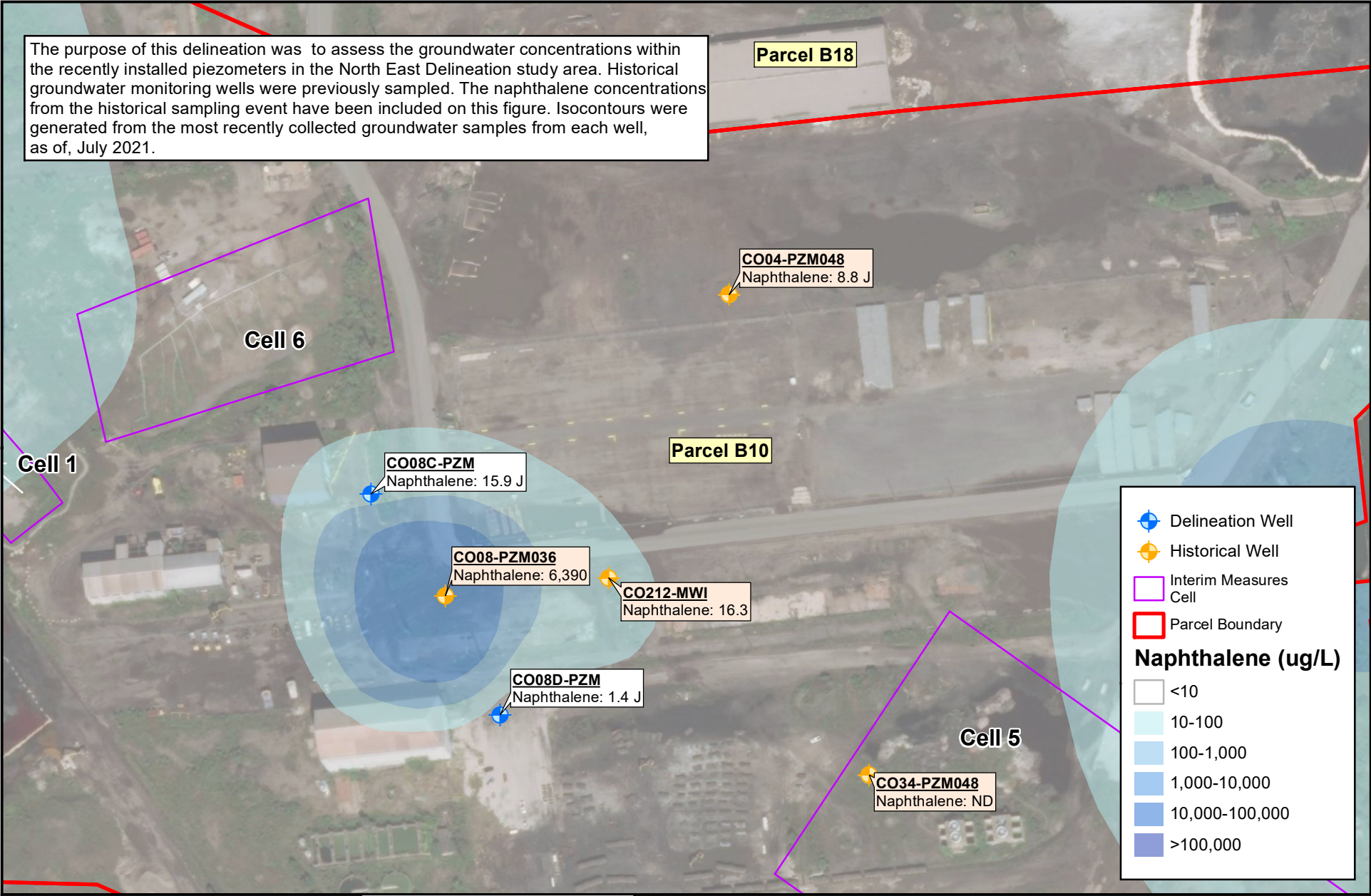


Coke Oven Area - Intermediate Zone  
Groundwater Benzene Concentrations (ug/L)  
Benzene Isocontours (July 2021)

Date: 8/5/2021

**Figure 5**

The purpose of this delineation was to assess the groundwater concentrations within the recently installed piezometers in the North East Delineation study area. Historical groundwater monitoring wells were previously sampled. The naphthalene concentrations from the historical sampling event have been included on this figure. Isocontours were generated from the most recently collected groundwater samples from each well, as of, July 2021.



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0 125 250  
Feet

Coke Oven Area - Intermediate Zone  
Groundwater Naphthalene Concentrations (ug/L)  
Naphthalene Isocontours (July 2021)

Date: 8/5/2021

**Figure 6**

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## **TABLES**

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**Table 1 - Northeast Delineation  
Parcel B10  
Summary of Benzene and Napthalene Detected in Shallow Groundwater**

Well ID	Sample Date	Benzene Concentration (ug/L)	Napthalene Concentration (ug/L)
CO04-PZM004	12/19/2001	<b>660</b>	<b>6,700</b>
CO05A-PZM	5/19/2021	<b>1,330</b>	<b>16,600 J</b>
CO05B-PZM	5/20/2021	<b>2,550</b>	<b>12,500 J</b>
CO05C-PZM	5/19/2021	<b>3.8</b>	<b>7.4 J</b>
CO05-PZM006	6/10/2015	<b>1,850</b>	<b>5,750</b>
CO06-PZM008	12/20/2001	ND	ND
CO08A-PZM	5/20/2021	<b>452</b>	<b>5,190 J</b>
CO08B-PZM	5/19/2021	<b>5,240</b>	<b>1,490 J</b>
CO08-PZM005	6/10/2015	<b>15,000</b>	<b>1,020</b>
CO09-PZM007	6/10/2015	<b>358</b>	<b>1,480</b>
CO100-PZM	10/7/2019	<b>7,080</b>	<b>1,270</b>
CO10-PZM006	6/11/2015	<b>0.32 J</b>	<b>0.35 J</b>
CO152-PZM	4/10/2020	<b>1,520</b>	<b>37.3</b>
CO159-PZM	4/10/2020	<b>64.7</b>	<b>54.6</b>
CO167-PZM	4/10/2020	<b>5.6</b>	<b>82.6</b>
CO17-PZM005	7/1/2004	<b>28,000</b>	<b>640</b>
CO19-PZM004	6/10/2015	<b>409</b>	<b>10.5</b>
CO20-PZM004	6/10/2015	<b>70.9</b>	<b>1,100</b>
CO212A-PZM	5/20/2021	ND	<b>1.2</b>
CO212-MWS	2/6/2020	<b>10,600</b>	<b>19,000</b>
CO216-MWS	4/10/2020	<b>53.4</b>	<b>2,850</b>
CO21-PZM005	12/20/2001	<b>0.46 J</b>	<b>2.2 J</b>
CO22-PZM005	12/20/2001	<b>560</b>	<b>2,600</b>
CO23-PZM008	5/25/2021	<b>567</b>	<b>2,770</b>
CO24-PZM007	5/25/2021	<b>2.9</b>	<b>1,320</b>
CO25-PZM008	6/10/2015	<b>1,210</b>	<b>9,520</b>
CO32-PZM004	3/19/2020	<b>12.9</b>	N/A
CO93-PZM	5/25/2021	<b>181,000</b>	<b>1,840</b>

**Detections in bold**

**Values in red indicate an exceedance of the Project Action Limit (PAL)**

Benzene PAL = 5 ug/L

Napthalene PAL = 0.17 ug/L

N/A indicates that the parameter was not analyzed for this sample

ND: This analyte was not detected in the sample above the laboratory sample quantitation/detection limit.

J: The positive result reported for this analyte is a quantitative estimate.

**Table 2 - Northeast Delineation  
Parcel B10  
Summary of Benzene and Napthalene Detected in Intermediate Groundwater**

Well ID	Sample Date	Benzene Concentration (ug/L)	Napthalene Concentration (ug/L)
CO04-PZM048	3/10/2020	<b>4.3 J</b>	<b>8.8 J</b>
CO08C-PZM	5/19/2021	ND	<b>15.9 J</b>
CO08D-PZM	5/19/2021	<b>9</b>	<b>1.4 J</b>
CO08-PZM036	6/11/2015	<b>35,300</b>	<b>6,390</b>
CO212-MWI	2/6/2020	<b>3.4</b>	<b>16.3</b>

**Detections in bold**

**Values in red indicate an exceedance of the Project Action Limit (PAL)**

Benzene PAL = 5 ug/L

Naphthalene PAL = 0.17 ug/L

ND: This analyte was not detected in the sample above the laboratory sample quantitation/detection limit.

J: The positive result reported for this analyte is a quantitative estimate.

**Table 3 - NAPL Gauging Activities  
Parcel B10**

Sample ID	Installation Date	Well Total Depth (Feet bgs)	Screen Interval (Feet bgs)	Riser Stick-Up (Feet)	4/9/2021			4/13/2021			4/14/2021		
					Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)	Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)	Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)
CO05B-PZM	4/14/2021	13.6	8.6-13.6	2.86	NA	NA	NA	NA	NA	NA	trace	6.40	trace
CO05D-PZM	4/14/2021&4/28/2021	19	9-19	2.90	NA	NA	NA	NA	NA	NA	8.10	9.80	1.70
CO08A-PZM	4/9/2021	17	7-17	2.90	-	14.42	-	NM	NM	NM	NM	NM	NM
CO212B-MWS	4/13/2021	20	10-20	2.90	NA	NA	NA	-	13.86	-	NM	NM	NM

Sample ID	Installation Date	Well Total Depth (Feet bgs)	Screen Interval (Feet bgs)	Riser Stick-Up (Feet)	4/15/2021			4/28/2021			5/11/2021		
					Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)	Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)	Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)
CO05B-PZM	4/14/2021	13.6	8.6-13.6	2.86	-	6.47	-	NM	NM	NM	NM	NM	NM
CO05D-PZM	4/14/2021&4/28/2021	19	9-19	2.90	8.40	9.10	0.70	-	8.68	-	NM	NM	NM
CO08A-PZM	4/9/2021	17	7-17	2.90	12.38	12.44	0.06	NM	NM	NM	13.22	13.30	0.08
CO212B-MWS	4/13/2021	20	10-20	2.90	-	13.80	-	NM	NM	NM	NM	NM	NM

Sample ID	Installation Date	Well Total Depth (Feet bgs)	Screen Interval (Feet bgs)	Riser Stick-Up (Feet)	5/12/2021			5/17/2021			5/20/2021		
					Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)	Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)	Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)
CO05B-PZM	4/14/2021	13.6	8.6-13.6	2.86	NM	NM	NM	trace	7.63	trace	trace	7.85	trace
CO05D-PZM	4/14/2021&4/28/2021	19	9-19	2.90	NM	NM	NM	NM	NM	NM	NM	NM	NM
CO08A-PZM	4/9/2021	17	7-17	2.90	NM	NM	NM	13.22	13.30	0.08	13.52	13.59	0.07
CO212B-MWS	4/13/2021	20	10-20	2.90	trace	14.43	trace	22.37	15.45	0.30	22.37	15.45	0.30

NA = Not Applicable

NM = Not Measured

**Pink** = LNAPL Detection

**Blue** = DNAPL Detection

bgs = below ground surface

TOC = Top of Casing

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**ATTACHMENT 1**

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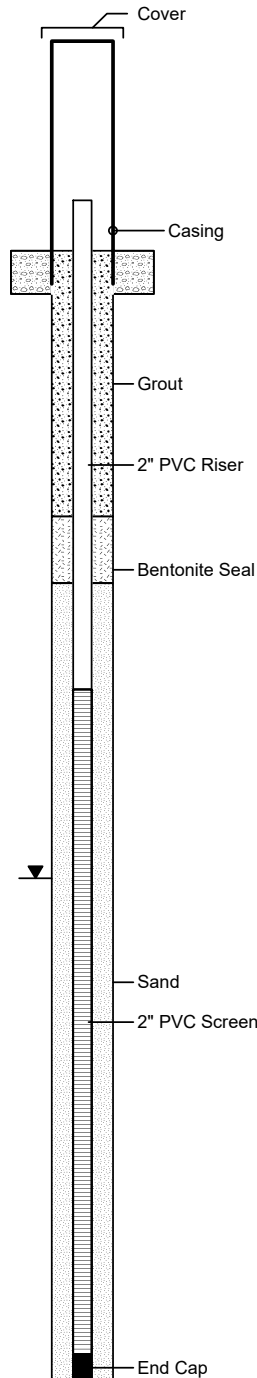
Project Name : COA NE Delineation  
 Project Number : 21010210  
 Client : Tradepoint Atlantic  
 Site : Sparrow's Point  
 Borehole Location : Parcel B10  
 ARM Representative : L. Perrin  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Connelly  
 Driller : J. Townsend  
 Drilling Equipment : Sonic Rig

Northing (ft) : 562761.05  
 Easting (ft) : 1457196.25  
 Date/Time Started : 04/13/21 1430  
 Date/Time Completed : 04/13/21 1545  
 Surf. Elev. (ft AMSL) : 12.26  
 TOC Elev. (ft AMSL) : 15.13  
 Total Well Depth (ft) : 17' bgs  
 Depth to Water (ft) : 48 Hr: 12.43' TOC  
 Bit/Auger Size (in.) : 7.75 OD (4.25 ID)

Well ID: CO05A-PZM

(page 1 of 1)

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	USCS	REMARKS
0		0.6	(0-7.5') FILL/SLAG, SAND and GRAVEL-sized, with SILT from 7.5-10' bgs, medium dense to loose, brown with some white, yellow, and light gray, then very dark brown from 5-7.5' bgs, brown from 7.5-10' bgs, dry then wet at 9' bgs, non-plastic, non-cohesive	SW/GW	4.8" Protective Steel Casing with 5.4" Locking Lid 2 x 2' concrete pad 2" expandable-type cap  Riser: Sch 40 PVC Riser Diameter: 2 in Riser Stickup (ags): 2.94'  Bentonite Seal: 3/4" chips Top: 4' bgs Bottom: 5' bgs  Grout: 95% Portland/5% Bentonite Top: 0' bgs Bottom: 4' bgs  Screen: Sch 40 PVC Screen Diameter: 2 in Slot Size: 0.020" Top: 6.6' bgs Bottom: 16.6' bgs Total Screen: 10'  Filter Pack: FilPro W.G. #2 Sand Top: 5' bgs Bottom: 17' bgs  4" Long flush-threaded PVC end cap
	100	0.3			
	100	0.2			
	100	0.3			
	100	0.1			
5		0.5			
	100	0.6			
	100	0.9			
	100	5.0			
	100	5.4			
10		7.6	(10-17') SLAG, GRAVEL-sized, with trace SILT and SAND, loose to medium dense, very dark gray to black, wet, non-plastic, non-cohesive, very strong odor throughout, trace to moderate amount of sheen throughout	GW	
	100	18.0			
	100	42.1			
	100	169.9			
	100	317.0			
15		94.8			
	100	246.1			
			End of boring		



TOC - Top of PVC Casing  
 AMSL - Above Mean Sea Level  
 ags - above ground surface  
 bgs - below ground surface

Monitoring Well Development  
 Date: 05/11/2021  
 Purged Amount: 40 gallons





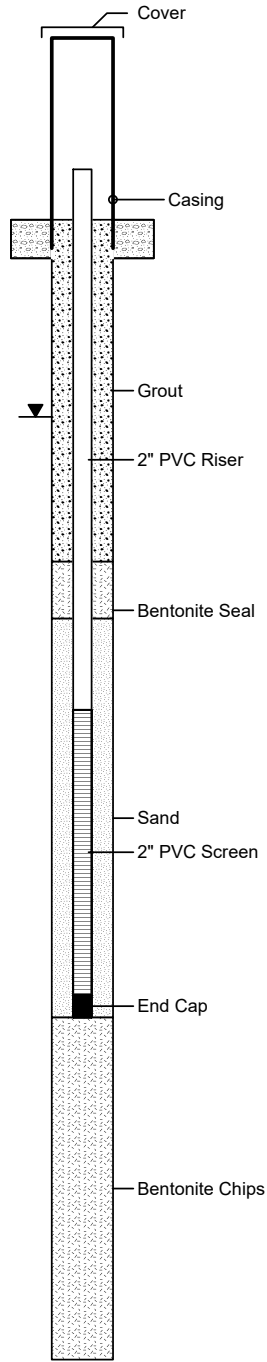
Project Name : COA NE Delineation  
 Project Number : 21010210  
 Client : Tradepoint Atlantic  
 Site : Sparrow's Point  
 Borehole Location : Parcel B10  
 ARM Representative : L. Perrin  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Connelly  
 Driller : J. Townsend  
 Drilling Equipment : Sonic Rig

Northing (ft) : 563067.00  
 Easting (ft) : 1457427.31  
 Date/Time Started : 04/14/21 1130  
 Date/Time Completed : 04/14/21 1330  
 Surf. Elev. (ft AMSL) : 11.84  
 TOC Elev. (ft AMSL) : 14.56  
 Total Well Depth (ft) : 20' bgs  
 Depth to Water (ft) : 48 Hr: 6.47' TOC  
 Bit/Auger Size (in.) : 7.75 OD (4.25 ID)

Well ID: CO05B-PZM

(page 1 of 1)

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	USCS	REMARKS
0		1.5	(0-6') FILL, SAND-sized, and SLAG, SAND and GRAVEL-sized, medium dense to dense, dark brown, moist, non-plastic, non-cohesive	SW/GW	4.8" Protective Steel Casing with 5.4" Locking Lid 2 x 2' concrete pad 2" expandable-type cap
		1.2			
100		1.0			
		1.5			
5		3.2	(6-9') CONCRETE FOUNDATION, green and white	NA	Riser: Sch 40 PVC Riser Diameter: 2 in Riser Stickup (ags): 2.86'
		23.6			
		16.7	(9-14') SLAG, SAND and GRAVEL-sized, with SILT, medium dense, black, wet, non-plastic, non-cohesive, light amount of NAPL, moderate amount of sheen and odor present, and WOOD FRAGMENTS present	SW/GW	Bentonite Seal Top: 6' bgs Bottom: 7' bgs
		13.1			
10		6.3			
		4.8			
		20.4	(14-20') CLAY, firm to very firm, very light brown, moist, low plasticity, cohesive	CL	Grout: 95% Portland/5% Bentonite Top: 0' bgs Bottom: 6' bgs
		21.7			
15		46.2			
		55.7			
		11.6	End of boring		Screen: Sch 40 PVC Screen Diameter: 2 in Slot Size: 0.020" Top: 8.6' bgs Bottom: 13.6' bgs Total Screen: 5'
		0.4			
		0.1			
		100			
		0.1			
20		0.3			
		0.1			



TOC - Top of PVC Casing  
 AMSL - Above Mean Sea Level  
 ags - above ground surface  
 bgs - below ground surface

Monitoring Well Development  
 Date: 05/13/2021  
 Purged Amount: 45 gallons



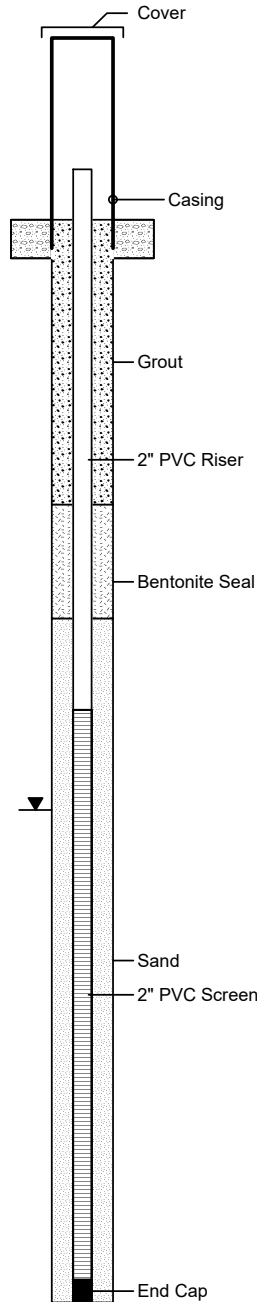
Project Name : COA NE Delineation  
 Project Number : 21010210  
 Client : Tradepoint Atlantic  
 Site : Sparrow's Point  
 Borehole Location : Parcel B10  
 ARM Representative : L. Perrin  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Connelly  
 Driller : J. Townsend  
 Drilling Equipment : Sonic Rig

Northing (ft) : 562729.71  
 Easting (ft) : 1457784.18  
 Date/Time Started : 04/15/21 0900  
 Date/Time Completed : 04/15/21 1110  
 Surf. Elev. (ft AMSL) : 12.44  
 TOC Elev. (ft AMSL) : 15.20  
 Total Well Depth (ft) : 19' bgs  
 Depth to Water (ft) : 48 Hr: 13.66' TOC  
 Bit/Auger Size (in.) : 7.75 OD (4.25 ID)

Well ID: CO05C-PZM

(page 1 of 1)

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	USCS	REMARKS
0		0.4	(0-5') FILL, SAND-sized, and SLAG, GRAVEL-sized, loose, brown, moist grading to wet, non-plastic, non-cohesive, gravel increases with depth	SW/GW	4.8" Protective Steel Casing with 5.4" Locking Lid 2 x 2' concrete pad 2" expandable-type cap
	100	0.6			
		0.6			
5		0.9	(5-10') SLAG, SAND and GRAVEL-sized, and FILL, SAND-sized, and SILT, medium dense, dark brown, moist then wet at 9' bgs, non-plastic, non-cohesive, large WOOD FRAGMENTS from 8-10' bgs, moderate solvent-like odor	SW/GW	Riser: Sch 40 PVC Riser Diameter: 2 in Riser Stickup (ags): 2.90'
	100	19.3			
		53.2			
10		45.8	(10-15') CONCRETE, white	NA	Bentonite Seal Top: 5' bgs Bottom: 7' bgs
	100	0.1			
		0.2			
15		0.0	(15-17') SLAG, GRAVEL-sized with some SAND-sized, medium dense, brownish gray, wet, non-plastic, non-cohesive	GW	Grout: 95% Portland/5% Bentonite Top: 0' bgs Bottom: 5' bgs
	50	0.0			
		-	(17-19') NO RECOVERY; drillers stated felt like GRAVEL	NA	Screen: Sch 40 PVC Screen Diameter: 2 in Slot Size: 0.020" Top: 9' bgs Bottom: 19' bgs Total Screen: 10'
		-			
20			End of boring		Filter Pack: FilPro W.G. #2 Sand Top: 7' bgs Bottom: 19' bgs



TOC - Top of PVC Casing  
 AMSL - Above Mean Sea Level  
 ags - above ground surface  
 bgs - below ground surface

Monitoring Well Development  
 Date: 05/13/2021  
 Purged Amount: 35 gallons



Project Name : COA NE Delineation  
 Project Number : 21010210  
 Client : Tradepoint Atlantic  
 Site : Sparrow's Point  
 Borehole Location : Parcel B10  
 ARM Representative : L. Perrin  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Connelly  
 Driller : J. Townsend  
 Drilling Equipment : Sonic Rig

Northing (ft) : 562996.19  
 Easting (ft) : 1457531.28  
 Date/Time Started : 04/28/21 1030  
 Date/Time Completed : 04/28/21 1230  
 Surf. Elev. (ft AMSL) : 11.83  
 TOC Elev. (ft AMSL) : 14.68  
 Total Well Depth (ft) : 23' bgs  
 Depth to Water (ft) : 48 Hr: 8.97' TOC  
 Bit/Auger Size (in.) : 7.75 OD (4.25 ID)

Well ID: CO05D-PZM

(page 1 of 1)

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	USCS	REMARKS
0		6.1	(0-0.8') FILL, SAND-sized, fine to coarse, with trace GRAVEL, fine, loose, pale brown, dry, non-plastic, non-cohesive	SW	<p>4.8" Protective Steel Casing with 5.4" Locking Lid            2 x 2' concrete pad            2" expandable-type cap</p> <p>Riser: Sch 40 PVC            Riser Diameter: 2 in            Riser Stickup (ags): 2.90'</p> <p>Bentonite Seal: 3/4" chips            Top: 3' bgs            Bottom: 4' bgs</p> <p>Grout: 95% Portland/5% Bentonite            Top: 0' bgs            Bottom: 3' bgs</p> <p>Screen: Sch 40 PVC            Screen Diameter: 2 in            Slot Size: 0.020"            Top: 5' bgs            Bottom: 23' bgs            Total Screen: 18'</p> <p>Filter Pack: FilPro W.G. #2 Sand            Top: 4' bgs            Bottom: 19' bgs</p> <p>4" Long flush-threaded PVC end cap</p>
	100	5.4	(0.8-7') SILTY SAND, very fine to medium with trace coarse, medium dense, white grading to greenish gray, non-plastic, non-cohesive	SM	
5		4.8			
		4.8			
		4.6			
		9.0			
		6.5			
	100	5.2	(7-9') SLAG, SAND and GRAVEL-sized, loose to medium dense, very dark brown, wet, non-plastic, non-cohesive	SW/GW	
		3.7			
10		0.4	(9-9.6') CONCRETE, white	NA SM	
		0.5	(9.6-10') SILTY SAND, medium dense, grayish brown, moist, non-plastic, non-cohesive		
		0.4	(10-15') CONCRETE	NA	
	100	0.6			
		0.8			
15		0.7			
	50	-	(15-17') CONCRETE and SILTY SAND, moist, grayish brown, non-plastic, non-cohesive	NA	
		1.0			
		-	(17-23') Possible void; casings were covered in NAPL when removed		
		-			
20	0	-		NA	
		-			
		-			
25		-	End of boring		

TOC - Top of PVC Casing  
 AMSL - Above Mean Sea Level  
 ags - above ground surface  
 bgs - below ground surface  
 W - weight of hammer



Project Name : COA NE Delineation  
 Project Number : 21010210  
 Client : Tradepoint Atlantic  
 Site : Sparrow's Point  
 Borehole Location : Parcel B10  
 ARM Representative : L. Perrin  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Connelly  
 Driller : J. Townsend  
 Drilling Equipment : Sonic Rig

Northing (ft) : 562396.75  
 Easting (ft) : 1456301.88  
 Date/Time Started : 04/09/21 0915  
 Date/Time Completed : 04/09/21 1200  
 Surf. Elev. (ft AMSL) : 12.63  
 TOC Elev. (ft AMSL) : 15.71  
 Total Well Depth (ft) : 17' bgs  
 Depth to Water (ft) : 48 Hr: 12.44' TOC  
 Depth to Product (ft) : 48 Hr: 12.38' TOC  
 Bit/Auger Size (in.) : 7.75 OD (4.25 ID)

Well ID: CO08A-PZM

(page 1 of 1)

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	USCS	REMARKS
0		0.0	(0-0.3') CLAY fill with SILT, firm, light brown, dry, non-plastic, non-cohesive	CL	<p>4.8" Protective Steel Casing with 5.4" Locking Lid            2 x 2' concrete pad            2" expandable-type cap</p> <p>Riser: Sch 40 PVC            Riser Diameter: 2 in            Riser Stickup (ags): 2.90'</p> <p>Bentonite Seal: 3/4" chips            Top: 4' bgs            Bottom: 5' bgs</p> <p>Grout: 95% Portland/5% Bentonite            Top: 0' bgs            Bottom: 4' bgs</p> <p>Screen: Sch 40 PVC            Screen Diameter: 2 in            Slot Size: 0.020"            Top: 7' bgs            Bottom: 17' bgs            Total Screen: 10'</p> <p>Filter Pack: FilPro W.G. #2 Sand            Top: 5' bgs            Bottom: 17' bgs</p> <p>4" Long flush-threaded PVC end cap</p>
		0.0	(0.3-5') FILL, SAND-sized, with some GRAVEL, medium dense, dark brown, dry, non-plastic, non-cohesive	SW	
100		0.0			
		0.0			
5		0.0	(5-11) CONCRETE		
		0.0			
100		2.3		NA	
		-			
10		-			
		-			
60		5.0	(11-13') CLAY fill with SILT and trace SLAG, GRAVEL-sized, firm, light brown, moist, low plasticity, cohesive	CL	
		79.9	(13-17') SLAG, GRAVEL-sized, fine to coarse, with some SAND-sized, light gray and light grayish brown from 13-15' bgs, white from 15-15.5' bgs, light gray from 15.5-16.2' bgs, dark gray from 16.2-17' bgs, wet, non-plastic, non-cohesive, light amount of NAPL from 15-16.5' bgs, strong odor from 13-17' bgs	GW	
15		86.4			
		229.3			
100		90.3			
			End of boring		
20					

TOC - Top of PVC Casing  
 AMSL - Above Mean Sea Level  
 ags - above ground surface  
 bgs - below ground surface



Project Name : COA NE Delineation  
 Project Number : 21010210  
 Client : Tradepoint Atlantic  
 Site : Sparrow's Point  
 Borehole Location : Parcel B10  
 ARM Representative : L. Perrin  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Connelly  
 Driller : J. Townsend  
 Drilling Equipment : Sonic Rig

Northing (ft) : 562041.35  
 Easting (ft) : 1456400.01  
 Date/Time Started : 04/12/21 0945  
 Date/Time Completed : 04/12/21 1130  
 Surf. Elev. (ft AMSL) : 12.53  
 TOC Elev. (ft AMSL) : 15.30  
 Total Well Depth (ft) : 17' bgs  
 Depth to Water (ft) : 48 Hr: 13.45' TOC  
 Bit/Auger Size (in.) : 7.75 OD (4.25 ID)

**Well ID: CO08B-PZM**

(page 1 of 1)

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	USCS	REMARKS
0		0.6	(0-2') SLAG, SAND and GRAVEL-sized, with some SILT, medium dense to loose, red, moist, non-plastic, non-cohesive	SW/GW	<p>4.8" Protective Steel Casing with 5.4" Locking Lid 2 x 2' concrete pad 2" expandable-type cap</p> <p>Riser: Sch 40 PVC Riser Diameter: 2 in Riser Stickup (ags): 2.90'</p> <p>Bentonite Seal: 3/4" chips Top: 4' bgs Bottom: 5' bgs</p> <p>Grout: 95% Portland/5% Bentonite Top: 0' bgs Bottom: 4' bgs</p> <p>Screen: Sch 40 PVC Screen Diameter: 2 in Slot Size: 0.020" Top: 7' bgs Bottom: 17' bgs Total Screen: 10'</p> <p>Filter Pack: FilPro W.G. #2 Sand Top: 5' bgs Bottom: 17' bgs</p> <p>4" Long flush-threaded PVC end cap</p>
		0.8			
100		0.0	(2-10') SLAG, SAND-sized with some GRAVEL-sized, fine and trace coarse, trace COBBLES from 2-3' bgs, medium dense, light brownish gray, dry, non-plastic, non-cohesive		
		0.0			
5		0.0			
		0.2			
		0.2		SW/GW	
		0.0			
		0.0			
10		0.0			
		5.3	(10-14') SLAG/FILL, GRAVEL-sized, coarse, loose, dark brown, wet, non-plastic, non-cohesive, trace sheen	GP	
		4.6			
60		11.0			
		6.5			
		7.5	(14-14.5') SLAG, SAND-sized, with trace GRAVEL, fine, medium dense, dark brown, wet, non-plastic, non-cohesive, trace sheen	SW	
15		106.7	(14.5-17') SLAG/FILL, SAND and GRAVEL-sized, coarse, loose, dark brown, wet, non-plastic, non-cohesive, trace to very light amount of sheen	SW/GW	
		185.8			
			End of boring		

TOC - Top of PVC Casing  
 AMSL - Above Mean Sea Level  
 ags - above ground surface  
 bgs - below ground surface

Monitoring Well Development  
 Date: 5/11/2021  
 Purged Amount: 33 gallons





Project Name : COA NE Delineation  
 Project Number : 21010210  
 Client : Tradepoint Atlantic  
 Site : Sparrow's Point  
 Borehole Location : Parcel B10  
 ARM Representative : L. Perrin  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Connelly  
 Driller : J. Townsend  
 Drilling Equipment : Sonic Rig

Northing (ft) : 562401.69  
 Easting (ft) : 1456301.54  
 Date/Time Started : 04/09/21 1200  
 Date/Time Completed : 04/09/21 1540  
 Surf. Elev. (ft AMSL) : 12.71  
 TOC Elev. (ft AMSL) : 15.87  
 Total Well Depth (ft) : 60' bgs  
 Depth to Water (ft) : 48 Hr: 15.70' TOC  
 Bit/Auger Size (in.) : 7.75 OD (4.25 ID)

**Well ID: CO08C-PZM**

(page 1 of 2)

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	USCS	REMARKS
0		1.0	(0-0.9') GRAVEL, fine to coarse, loose, white with light gray, dry, non-plastic, non-cohesive	GW	<p>4.8" Protective Steel Casing with 5.4" Locking Lid 2 x 2' concrete pad 2" expandable-type cap</p> <p>Riser: Sch 40 PVC Riser Diameter: 2 in Riser Stickup (ags): 2.90'</p> <p>Bentonite Seal: 3/4" chips Top: 48' bgs Bottom: 50' bgs</p> <p>Grout: 95% Portland/5% Bentonite Top: 0' bgs Bottom: 48' bgs</p> <p>Screen: Sch 40 PVC Screen Diameter: 2 in Slot Size: 0.020" Top: 52' bgs Bottom: 57' bgs Total Screen: 5'</p> <p>Filter Pack: FilPro W.G. #2 Sand Top: 5' bgs Bottom: 17' bgs 4" Long flush-threaded PVC end cap</p>
		1.4			
100		1.7	(0.9-5') SLAG, GRAVEL-sized, fine to coarse, with trace SAND-sized, medium dense, light gray and light grayish brown with trace white, dry with very moist from 2.5-3' bgs, non-plastic, non-cohesive	GW	
		10.5			
5		30.8			
		0.8	(5-5') CONCRETE	NA	
		0.7			
100		1.1	(6-17') SLAG, GRAVEL-sized, fine to coarse, with trace SAND-sized, some COBBLES and SILT, medium dense, light gray with light brownish gray with trace white, dry then wet at 10' bgs, odor from 10-17' bgs, light amount of NAPL from 15-17' bgs	GW	
		1.3			
10		4.0			
		38.8			
		31.4			
100		37.6			
		72.5			
15		297.0			
		201.8			
		29.9			
100		8.0	(17-19') SLAG, GRAVEL-sized, fine to coarse, trace SAND-sized, loose, gray to dark gray, wet, non-plastic, non-cohesive, trace NAPL	GW	
		2.7			
20		3.5	(19-29') SLAG, SAND-sized, coarse to very coarse, GRAVEL-sized from 20-29' bgs, medium dense, greenish gray, wet, non-plastic, non-cohesive	SW/GW	
		1.8			
		1.6			
100		0.9			
		1.1			
25		1.1			
		5.1			
		2.4			
100		2.7			
		5.9			
30		36.4	(29-30') FILL, SAND-sized, and SILT with trace GRAVEL, medium dense, dark brown, non-plastic, non-cohesive	SW-SM	
		0.0			
		0.0	(30-42.5') SILTY CLAY, firm, grayish brown, moist, low plasticity, cohesive, trace ORGANICS	CL	
		0.0			
35		0.0			

TOC - Top of PVC Casing  
 AMSL - Above Mean Sea Level  
 ags - above ground surface  
 bgs - below ground surface

Monitoring Well Development  
 Date: 5/11/2021  
 Purged Amount: 45 gallons



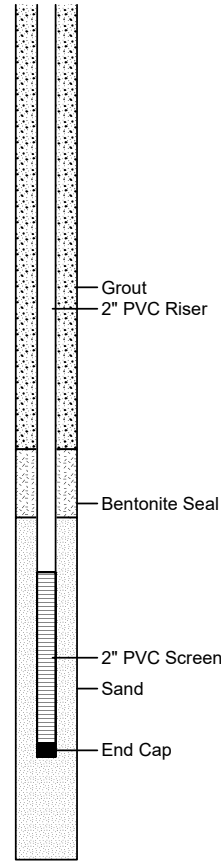
Project Name : COA NE Delineation  
 Project Number : 21010210  
 Client : Tradepoint Atlantic  
 Site : Sparrow's Point  
 Borehole Location : Parcel B10  
 ARM Representative : L. Perrin  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Connolly  
 Driller : J. Townsend  
 Drilling Equipment : Sonic Rig

Northing (ft) : 562401.69  
 Easting (ft) : 1456301.54  
 Date/Time Started : 04/09/21 1200  
 Date/Time Completed : 04/09/21 1540  
 Surf. Elev. (ft AMSL) : 12.71  
 TOC Elev. (ft AMSL) : 15.87  
 Total Well Depth (ft) : 60' bgs  
 Depth to Water (ft) : 48 Hr: 15.70' TOC  
 Bit/Auger Size (in.) : 7.75 OD (4.25 ID)

Well ID: CO08C-PZM

(page 2 of 2)

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	USCS	REMARKS
35	0.0	0.0			
100	0.0	0.0		CL	
40	0.0	0.0			
100	0.0	0.0	(42.5-42.9') SAND with trace SILT, medium to coarse, medium dense, grayish brown, wet, non-plastic, non-cohesive	SW	
45	0.0	0.0	(42.9-44.6') SILTY CLAY, firm, grayish brown, moist, low plasticity, cohesive	CL	
100	0.0	0.0	(44.6-45') SAND with trace SILT, medium dense, grayish brown, wet, non-plastic, non-cohesive	SW	
50	0.0	0.0	(45-55') SILTY CLAY, firm, grayish brown, moist, low plasticity, cohesive	CL	
100	0.0	0.0			
55	1.6	0.3	(55-60') SAND, fine to medium, medium dense, very light brown, wet, non-plastic, non-cohesive	SW	
100	0.2	0.1			
60	0.0	0.0	End of boring		
65					
70					



TOC - Top of PVC Casing  
 AMSL - Above Mean Sea Level  
 ags - above ground surface  
 bgs - below ground surface

Monitoring Well Development  
 Date: 5/11/2021  
 Purged Amount: 45 gallons



Project Name : COA NE Delineation  
 Project Number : 21010210  
 Client : Tradepoint Atlantic  
 Site : Sparrow's Point  
 Borehole Location : Parcel B10  
 ARM Representative : L. Perrin  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Connelly  
 Driller : J. Townsend  
 Drilling Equipment : Sonic Rig

Northing (ft) : 562039.24  
 Easting (ft) : 1456389.99  
 Date/Time Started : 04/12/21 1145  
 Date/Time Completed : 04/13/21 1115  
 Surf. Elev. (ft AMSL) : 12.68  
 TOC Elev. (ft AMSL) : 15.01  
 Total Well Depth (ft) : 46.35' bgs  
 Depth to Water (ft) : 48 Hr: 14.56' TOC  
 Bit/Auger Size (in.) : 7.75 OD (4.25 ID)

Well ID: CO08D-PZM

(page 1 of 2)

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	USCS	REMARKS
0	0.0	0.0	(0-8') FILL, SAND-sized, fine to medium, and SLAG/FILL, GRAVEL-sized, fine to coarse, medium dense to loose, brown, dry grading to moist, non-plastic, non-cohesive		<p>4.8" Protective Steel Casing with 5.4" Locking Lid 2 x 2' concrete pad 2" expandable-type cap</p> <p>Riser: Sch 40 PVC Riser Diameter: 2 in Riser Stickup (ags): 2.50'</p> <p>Bentonite Seal: 3/4" chips Top: 33' bgs Bottom: 35' bgs</p> <p>Grout: 95% Portland/5% Bentonite Top: 0' bgs Bottom: 33' bgs</p> <p>Screen: Sch 40 PVC Screen Diameter: 2 in Slot Size: 0.020" Top: 37.5' bgs Bottom: 47.5' bgs Total Screen: 10'</p> <p>Filter Pack: FilPro W.G. #2 Sand Top: 35' bgs Bottom: 47.5' bgs 4" Long flush-threaded PVC end cap</p> <p>Collapsed Soil Top: 47.5' bgs Bottom: 50' bgs</p>
100	0.2	0.2		SW/GW	
5	0.6	0.2		SW/GW	
10	0.2	0.1	(8-10') SLAG, SAND and GRAVEL-sized, with trace COBBLES, medium dense, grayish brown, dry, non-plastic, non-cohesive	SW/GW	
15	0.2	2.0	(10-15') SLAG, SAND and GRAVEL-sized, medium dense, very dark brown to black, wet, non-plastic, non-cohesive, moderate sheen from 10-11' bgs	SW/GW	
20	4.3	4.2	(15-16') SLAG, SAND-sized, loose, black, wet, non-plastic, non-cohesive	SW	
25	136.0	32.2	(16-19') SLAG/FILL, GRAVEL-sized to SAND-sized, medium dense, very dark brown to black, wet, non-plastic, non-cohesive	SW/GW	
30	35.8	118.5	(19-20') SLAG, SAND-sized, loose, black, wet, non-plastic, non-cohesive, small SHELL FRAGMENTS throughout	SW	
35	0.0	0.0	(20-21') SAND with CLAY, medium dense, very pale brown, wet, non-plastic, non-cohesive	SW-SC	
40	0.1	0.0	(21-23.5') SANDY CLAY, very firm, very pale brown, moist, low plasticity, cohesive	CL	
45	0.0	0.0	(23.5-25') CLAY with SAND, very firm, very pale brown, moist, low plasticity, cohesive	CL	
50	0.1	0.1	(25-30') CLAY, soft, brown, very moist, low plasticity, cohesive	CL	

TOC - Top of PVC Casing  
 AMSL - Above Mean Sea Level  
 ags - above ground surface  
 bgs - below ground surface

Monitoring Well Development  
 Date: 5/11/2021  
 Purged Amount: 50 gallons



**ARM Group LLC**  
Engineers and Scientists

Project Name : COA NE Delineation  
 Project Number : 21010210  
 Client : Tradepoint Atlantic  
 Site : Sparrow's Point  
 Borehole Location : Parcel B10  
 ARM Representative : L. Perrin  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Connelly  
 Driller : J. Townsend  
 Drilling Equipment : Sonic Rig

Northing (ft) : 562039.24  
 Easting (ft) : 1456389.99  
 Date/Time Started : 04/12/21 1145  
 Date/Time Completed : 04/13/21 1115  
 Surf. Elev. (ft AMSL) : 12.68  
 TOC Elev. (ft AMSL) : 15.01  
 Total Well Depth (ft) : 46.35' bgs  
 Depth to Water (ft) : 48 Hr: 14.56' TOC  
 Bit/Auger Size (in.) : 7.75 OD (4.25 ID)

Well ID: CO08D-PZM

(page 2 of 2)

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	USCS	REMARKS
26	100	0.1		CL	
31	100	0.1	(30-40') Layers of SAND with SILT, medium dense, very pale brown, wet, non-plastic, non-cohesive alternating with layers of SILTY SAND, very fine to fine, very dense, very pale brown, moist, non-plastic, non-cohesive	SW-SM/SM	
36	100	0.0		SW	
41	100	0.0	(40-50') SAND, fine to medium, loose to medium dense, very pale brown, wet, non-plastic, non-cohesive	SW	
46	100	0.0			
51			End of boring		

TOC - Top of PVC Casing  
 AMSL - Above Mean Sea Level  
 ags - above ground surface  
 bgs - below ground surface

Monitoring Well Development  
 Date: 5/11/2021  
 Purged Amount: 50 gallons



Project Name : COA NE Delineation  
 Project Number : 21010210  
 Client : Tradepoint Atlantic  
 Site : Sparrow's Point  
 Borehole Location : Parcel B10  
 ARM Representative : L. Perrin  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Connelly  
 Driller : J. Townsend  
 Drilling Equipment : Sonic Rig

Northing (ft) : 562397.73  
 Easting (ft) : 1456634.72  
 Date/Time Started : 04/15/21 1145  
 Date/Time Completed : 04/15/21 1500  
 Surf. Elev. (ft AMSL) : 13.20  
 TOC Elev. (ft AMSL) : 12.96  
 Total Well Depth (ft) : 20' bgs  
 Depth to Water (ft) : 48 Hr: 7.10' TOC  
 Bit/Auger Size (in.) : 7.75 OD (4.25 ID)

Well ID: CO212A-PZM

(page 1 of 1)

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	USCS	REMARKS
0		0.0	(0-1.2') SLAG, GRAVEL to SAND-sized, loose, brown, dry, non-plastic, non-cohesive	GW/SW	<p>Flush Mount Protective Steel Casing with 0.9" Lid 2 x 2' concrete pad 2" expandable-type cap</p> <p>Riser: Sch 40 PVC Riser Diameter: 2 in Riser Stickup (bgs): 0.30'</p> <p>Bentonite Seal: 3/4" chips Top: 5' bgs Bottom: 7' bgs</p> <p>Grout: 95% Portland/5% Bentonite Top: 0' bgs Bottom: 5' bgs</p> <p>Screen: Sch 40 PVC Screen Diameter: 2 in Slot Size: 0.020" Top: 9.5' bgs Bottom: 19.5' bgs Total Screen: 10'</p> <p>Filter Pack: FilPro W.G. #2 Sand Top: 7' bgs Bottom: 19.5' bgs</p> <p>4" Long flush-threaded PVC end cap</p> <p>Collapsed Soil Top: 19.5' bgs Bottom: 20' bgs</p>
100	0.0	0.0	(1.2-9') FILL, SAND and GRAVEL-sized, loose to medium dense, black, brown, and yellow, dry, non-plastic, non-cohesive	SW/GW	
5	0.0	0.0		SW/GW	
100	0.0	0.0		SW/GW	
10	0.1	0.1	(9-10') CONCRETE	NA	
100	0.1	0.1	(10-11.5') FILL, GRAVEL-sized, coarse, loose, red, yellow, and brown, wet, non-plastic, non-cohesive	GP	
100	0.1	0.1	(11.5-14.5') SLAG, GRAVEL-sized, coarse, loose, gray, wet, non-plastic, non-cohesive	GP	
15	2.5	3.7	(14.5-20') SLAG, SAND and GRAVEL-sized, with SILT, medium dense, green, wet, non-plastic, non-cohesive	SW/GW	
100	6.5	10.7		-SM	
20	5.5		End of boring		

TOC - Top of PVC Casing  
 AMSL - Above Mean Sea Level  
 ags - above ground surface  
 bgs - below ground surface

Monitoring Well Development  
 Date: 5/13/2021  
 Purged Amount: 15 gallons





Project Name : COA NE Delineation  
 Project Number : 21010210  
 Client : Tradepoint Atlantic  
 Site : Sparrow's Point  
 Borehole Location : Parcel B10  
 ARM Representative : L. Perrin  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Connelly  
 Driller : J. Townsend  
 Drilling Equipment : Sonic Rig

Northing (ft) : 562056.42  
 Easting (ft) : 1456792.94  
 Date/Time Started : 04/13/21 1132  
 Date/Time Completed : 04/13/21 1310  
 Surf. Elev. (ft AMSL) : 12.47  
 TOC Elev. (ft AMSL) : 15.33  
 Total Well Depth (ft) : 20' bgs  
 Depth to Water (ft) : 48 Hr: 13.80' TOC  
 Bit/Auger Size (in.) : 7.75 OD (4.25 ID)

Well ID: CO212B-PZM

(page 1 of 1)

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	USCS	REMARKS
0		0.9	(0-11.5') SLAG/FILL, SAND and GRAVEL-sized with some SILT, trace COBBLES from 0-2' bgs, loose to medium dense, brown to dark brown, dry then wet at 10' bgs, non-plastic, non-cohesive, trace sheen at 11' bgs	GW/SW	<p>4.8' Protective Steel Casing with 5.4" Locking Lid            2 x 2' concrete pad            2" expandable-type cap</p> <p>Riser: Sch 40 PVC            Riser Diameter: 2 in            Riser Stickup (ags): 2.90'</p> <p>Bentonite Seal: 3/4" chips            Top: 6' bgs            Bottom: 8' bgs</p> <p>Grout: 95% Portland/5% Bentonite            Top: 0' bgs            Bottom: 6' bgs</p> <p>Screen: Sch 40 PVC            Screen Diameter: 2 in            Slot Size: 0.020"            Top: 10' bgs            Bottom: 20' bgs            Total Screen: 10'</p> <p>Filter Pack: FilPro W.G. #2 Sand            Top: 8' bgs            Bottom: 20' bgs</p> <p>4" Long flush-threaded PVC end cap</p>
		0.9			
100		0.8			
		1.9			
		3.1			
5		7.3			
		0.8			
100		1.0			
		1.8			
		2.4			
10		1.6	(11.5-12.5') CONCRETE	NA	
		3.3	(12.5-14.2') SLAG/FILL, SAND and GRAVEL-sized, with SILT, loose to medium dense, very dark brown to black, wet, non-plastic, non-cohesive	GW/SW	
		3.3	(14.2-18.5') SILTY SAND with some SLAG, GRAVEL-sized, at 15' bgs, medium dense, black with some dark brown, wet, non-plastic, non-cohesive, light amount of sheen 15-18.5' bgs with odor	SM	
15		8.5			
		1.0			
		1.5			
100		5.3			
		38.6	(18.5-20') CLAY, soft, yellowish brown, very moist, low plasticity, cohesive	CL	
		40.1			
20			End of boring		

TOC - Top of PVC Casing  
 AMSL - Above Mean Sea Level  
 ags - above ground surface  
 bgs - below ground surface

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**ATTACHMENT 2**

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TABLE 1  
MULTIPARAMETER CALIBRATION LOG

Project Name Area B Parcel B10 NE Delineation Date 5-19-21  
 Weather 60s, Sunny  
 Calibrated by L. Perrin Instrument (Serial Number) Horiba U-52 (2BOMSAX4)  
Lamotte 2020t (1223-1319)

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard	4.49	54 F	4.52	86 F
Specific Conductance Standard #2	-		-	
pH (7)	-		-	
pH (4)	4.01		4.50	
pH(10)	-		-	
ORP Zobel Solution (240 mV)	-		223	
Dissolved Oxygen 100% water saturated air mg/L	8.60 <sup>¥</sup>		8.89 <sup>¥</sup>	
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	-		-	
Barometric Pressure mm Hg	770.64		770.38	
Turbidity #1 (0 NTU)	0.0		0.64	
Turbidity #2 (1 NTU)	1.0		1.32	
Turbidity #3 (10 NTU)	10		9.21	

<sup>¥</sup> Dissolved Oxygen were outside of the calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

TABLE 1  
MULTIPARAMETER CALIBRATION LOG

Project Name Area B Parcel B10 NE Delineation Date 5-20-21  
 Weather 70s, Sunny  
 Calibrated by L. Perrin Instrument (Serial Number) Horiba U-52 (2BOMSAX4)  
Lamotte 2020t (1223-1319)

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard	4.49	61 F	4.14	81 F
Specific Conductance Standard #2	-		-	
pH (7)	-		-	
pH (4)	4.01		4.11	
pH(10)	-		-	
ORP Zobel Solution (240 mV)	-		215	
Dissolved Oxygen 100% water saturated air mg/L	7.34 <sup>¥</sup>		5.50 <sup>¥</sup>	
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	-		-	
Barometric Pressure mm Hg	771.40		772.92	
Turbidity #1 (0 NTU)	0.0		0.85	
Turbidity #2 (1 NTU)	1.0		1.03	
Turbidity #3 (10 NTU)	10		9.88	

<sup>¥</sup> Dissolved Oxygen were outside of the calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.





# Low Flow Sampling Permanent Wells



**ARM Group Inc.**  
10001 ...

Project Name: NE Delineation  
 Well Number: C005B-P2M  
 Well Diameter (in): 2  
 Depth to Product (ft): Trace LNAPL  
 Depth to Water (ft): 7.85  
 Product Thickness (ft): Trace  
 Depth to Bottom (ft): 16.16

Project Number: 21010210  
 Date: 5/20/21  
 One Well Volume (gal):           
 QED Controller Settings:           
 Flow Rate (mL/min): 303  
 Length of time Purged (min): 30  
 Condition of Pad/Cover: Good/Good

### PURGING RECORD

Time	Volume Purged (gallons)	DTW (feet)	Temp (°C)	pH (s.u.) ± 0.1	Specific Conductance (ms/cm) ± 3%	Dissolved Oxygen (mg/L) ± 0.3	ORP (mV) ± 10	Turbidity (NTU) ± 10% or < 5	Comments
1100	0.0	7.85	26.82	7.37	3.72		-132	29.6	
1105	0.4	7.85	26.42	8.71	3.06		-300	18.5	Gray
1110	0.8	7.85	26.22	9.06	2.61		-322	12.11	
1115	1.2	7.85	26.12	9.12	2.35		-331	9.42	
1120	1.6	7.85	26.08	9.22	2.26		-333	7.35	
1125	2.0	7.85	26.04	9.30	2.21		-342	5.17	
1130	2.4	7.85	26.06	9.37	2.15		-349	4.86	

### MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter/Order	Container	Perservative	Collected?
<u>C005B-P2M</u>	<u>1140</u>	TCL-VOCs	3 - 40 mL VOA	HCl	
		TPH-GRO	3 - 40 mL VOA	HCl	
		TPH-DRO	2 - 1 L Amber	none	
		TCL-SVOCs	2 - 1 L Amber	none	
		Oil & Grease	2 - 1 L Amber	HCl	
		TAL-Metals & Mercury (total)	1 - 250 mL Plastic	HNO3	
		Hexavalent Chromium (total)	1 - 250 mL Plastic	none	
		Total Cyanide	1 - 250 mL Plastic	NaOH	
		TAL-Metals & Mercury (Dissolved) Field Filtered	1 - 250 mL Plastic	HNO3	
		Hexavalent Chromium (Dissolved) Field Filtered	1 - 250 mL Plastic	none	
PCB	2 - 1 L Amber	None			

Matrix Spike Duplicate

Sampled By: CLP

Comments: VOCs + PAH

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft  
 \_\_\_\_\_ ft x \_\_\_\_\_ gal/ft = \_\_\_\_\_ (gal)



**Low Flow Sampling  
Permanent Wells**



**ARM Group Inc.**  
Environmental Services & Remediation

Project Name: <u>NE Remediation</u>	Project Number: <u>21010210</u>
Well Number: <u>C005C-P2M</u>	Date: <u>5/19/21</u>
Well Diameter (in): <u>2</u>	One Well Volume (gal): <u>        </u>
Depth to Product (ft): <u>N/A</u>	QED Controller Settings: <u>        </u>
Depth to Water (ft): <u>14.58</u>	Flow Rate (mL/min): <u>303</u>
Product Thickness (ft): <u>NA</u>	Length of time Purged (min): <u>30</u>
Depth to Bottom (ft): <u>21.62</u>	Condition of Pad/Cover: <u>Good/Good</u>

**PURGING RECORD**

Time	Volume Purged (gallons)	DTW (feet)	Temp (°C)	pH (s.u.) ± 0.1	Specific Conductance (ms/cm) ± 3%	Dissolved Oxygen (mg/L) ± 0.3	ORP (mV) ± 10	Turbidity (NTU) ± 10% or < 5	Comments
1321	0.0	14.58	26.87	10.98	0.741				
1326	0.7	14.58	26.74	10.17	0.745		-130	43.4	
1331	0.8	14.58	26.74	9.81	0.718		-75	29.1	
1336	1.2	14.58	26.85	9.62	0.702		-30	18.6	
1341	1.6	14.58	27.03	9.48	0.685		-13	10.4	
1346	2.0	14.58	27.20	9.39	0.668		-2	9.52	
1351	2.4	14.58	27.48	9.32	0.657		2	8.93	
							7	8.25	

**MONITORING SAMPLE RECORD**

Sample ID	Time Collected	Parameter/Order	Container	Perservative	Collected?
<u>C005C-P2M</u>	<u>1355</u>	TCL-VOCs	3 - 40 mL VOA	HCl	
		TPH-GRO	3 - 40 mL VOA	HCl	
		TPH-DRO	2 - 1 L Amber	none	
		TCL-SVOCs	2 - 1 L Amber	none	
		Oil & Grease	2 - 1 L Amber	HCl	
		TAL-Metals & Mercury (total)	1 - 250 mL Plastic	HNO3	
		Hexavalent Chromium (total)	1 - 250 mL Plastic	none	
		Total Cyanide	1 - 250 mL Plastic	NaOH	
		TAL-Metals & Mercury (Dissolved) Field Filtered	1 - 250 mL Plastic	HNO3	
		Hexavalent Chromium (Dissolved) Field Filtered	1 - 250 mL Plastic	none	
PCB	2 - 1 L Amber	None			

Matrix Spike Duplicate

Sampled By: LLP

Comments:

VOCs + PATT

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft  
 ft x gal/ft = (gal)

# Low Flow Sampling Permanent Wells



**ARM Group Inc.**  
Environmental & Engineering Solutions

Project Name: NE delineation  
 Well Number: C098A-P2M  
 Well Diameter (in): 2  
 Depth to Product (ft): 13.52  
 Depth to Water (ft): 13.59  
 Product Thickness (ft): 0.07  
 Depth to Bottom (ft): 20.11

Project Number: 21010210  
 Date: 5/20/21  
 One Well Volume (gal): \_\_\_\_\_  
 QED Controller Settings: \_\_\_\_\_  
 Flow Rate (mL/min): NA  
 Length of time Purged (min): NA  
 Condition of Pad/Cover: Good Good

### PURGING RECORD

Time	Volume Purged (gallons)	DTW (feet)	Temp (°C)	pH (s.u.) ± 0.1	Specific Conductance (ms/cm) ± 3%	Dissolved Oxygen (mg/L) ± 0.3	ORP (mV) ± 10	Turbidity (NTU) ± 10% or < 5	Comments
Purged 3 well volumes and sampled per E. Magdon due to NAPL									

### MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter/Order	Container	Perservative	Collected?
C098A-P2M	1345	TCL-VOCs	3 - 40 mL VOA	HCl	
		TPH-GRO	3 - 40 mL VOA	HCl	
		TPH-DRO	2 - 1 L Amber	none	
		TCL-SVOCs	2 - 1 L Amber	none	
		Oil & Grease	2 - 1 L Amber	HCl	
		TAL-Metals & Mercury (total)	1 - 250 mL Plastic	HNO3	
		Hexavalent Chromium (total)	1 - 250 mL Plastic	none	
		Total Cyanide	1 - 250 mL Plastic	NaOH	
		TAL-Metals & Mercury (Dissolved) Field Filtered	1 - 250 mL Plastic	HNO3	
		Hexavalent Chromium (Dissolved) Field Filtered	1 - 250 mL Plastic	none	
PCB	2 - 1 L Amber	None			

Matrix Spike Duplicate

Sampled By: LUP

Comments: UVCs + PATT

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft  
 ft x gal/ft = (gal)



# Low Flow Sampling Permanent Wells



**ARM Group Inc.**  
Environmental Solutions • Engineering • Construction Services

Project Name: NE Decontamination  
 Well Number: C008B-P2M  
 Well Diameter (in): 2  
 Depth to Product (ft): NA  
 Depth to Water (ft): 14.09  
 Product Thickness (ft): NA  
 Depth to Bottom (ft): 19.15

Project Number: 21010210  
 Date: 5/19/21  
 One Well Volume (gal): \_\_\_\_\_  
 QED Controller Settings: \_\_\_\_\_  
 Flow Rate (mL/min): 341  
 Length of time Purged (min): 90  
 Condition of Pad/Cover: Good/Good

### PURGING RECORD

Time	Volume Purged (gallons)	DTW (feet)	Temp (°C)	pH (s.u.) ± 0.1	Specific Conductance (ms/cm) ± 3%	Dissolved Oxygen (mg/L) ± 0.3	ORP (mV) ± 10	Turbidity (NTU) ± 10% or < 5	Comments
1103	0.0	14.10	28.82	9.81	0.388				
1108	0.45	14.10	27.97	9.82	0.306		-243	107.1	
1113	0.90	14.10	28.17	9.36	0.289		-190	73.0	
1118	1.35	14.10	28.37	8.93	0.277		-99	44.4	
1123	1.80	14.10	28.70	8.12	0.272		-82	13.6	
1128	2.25	14.10	28.90	8.03	0.266		-78	11.2	
1133	2.70	14.10	29.15	7.96	0.260		-79	10.5	
							-82	9.31	

### MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter/Order	Container	Perservative	Collected?
<u>C008B-P2M</u>	<u>1200</u>	TCL-VOCs	3 - 40 mL VOA	HCl	
		TPH-GRO	3 - 40 mL VOA	HCl	
		TPH-DRO	2 - 1 L Amber	none	
		TCL-SVOCs	2 - 1 L Amber	none	
		Oil & Grease	2 - 1 L Amber	HCl	
		TAL-Metals & Mercury (total)	1 - 250 mL Plastic	HNO3	
		Hexavalent Chromium (total)	1 - 250 mL Plastic	none	
		Total Cyanide	1 - 250 mL Plastic	NaOH	
		TAL-Metals & Mercury (Dissolved) Field Filtered	1 - 250 mL Plastic	HNO3	
		Hexavalent Chromium (Dissolved) Field Filtered	1 - 250 mL Plastic	none	
PCB	2 - 1 L Amber	None			

Matrix Spike Duplicate

Sampled By: LCP

Comments: VOCS + PAH

N  
Y

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft  
 ft x gal/ft = (gal)

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# Low Flow Sampling Permanent Wells



## ARM Group Inc.

Small Business. Big Impact. Local Service.

Project Name: <u>NE Delineation</u>	Project Number: <u>2010210</u>
Well Number: <u>C08C-P2M</u>	Date: <u>5/19/21</u>
Well Diameter (in): <u>2</u>	One Well Volume (gal): <u>    </u>
Depth to Product (ft): <u>NA</u>	QED Controller Settings: <u>    </u>
Depth to Water (ft): <u>16.10</u>	Flow Rate (mL/min): <u>303</u>
Product Thickness (ft): <u>NA</u>	Length of time Purged (min): <u>20</u>
Depth to Bottom (ft): <u>61.49</u>	Condition of Pad/Cover: <u>Good/Good</u>

### PURGING RECORD

Time	Volume Purged (gallons)	DTW (feet)	Temp (°C)	pH (s.u.) ± 0.1	Specific Conductance (ms/cm) ± 3%	Dissolved Oxygen (mg/L) ± 0.3	ORP (mV) ± 10	Turbidity (NTU) ± 10% or < 5	Comments
807	0.0	16.19	23.02	4.07	1.93		247	24.7	
812	0.4	16.48	22.37	4.20	1.95		240	17.5	
817	0.8	16.59	21.90	4.32	1.97		239	13.1	
822	1.2	16.71	21.32	4.42	1.85		238	12.4	
827	1.6	16.87	21.03	4.48	1.86		236	10.9	

### MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter/Order	Container	Perservative	Collected?
<u>C08C-P2M</u>	<u>830</u>	TCL-VOCs	3 - 40 mL VOA	HCl	
		TPH-GRO	3 - 40 mL VOA	HCl	
		TPH-DRO	2 - 1 L Amber	none	
		TCL-SVOCs	2 - 1 L Amber	none	
		Oil & Grease	2 - 1 L Amber	HCl	
		TAL-Metals & Mercury (total)	1 - 250 mL Plastic	HNO3	
		Hexavalent Chromium (total)	1 - 250 mL Plastic	none	
		Total Cyanide	1 - 250 mL Plastic	NaOH	
		TAL-Metals & Mercury (Dissolved) Field Filtered	1 - 250 mL Plastic	HNO3	
		Hexavalent Chromium (Dissolved) Field Filtered	1 - 250 mL Plastic	none	
PCB	2 - 1 L Amber	None			

Matrix Spike Duplicate

Sampled By: LLP

Comments: VOC + PAH

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft  
ft x gal/ft = (gal)





# Low Flow Sampling Permanent Wells



Project Name: NE Delineation  
 Well Number: CO212A-PZM  
 Well Diameter (in): 2  
 Depth to Product (ft): NA  
 Depth to Water (ft): 7.94  
 Product Thickness (ft): NA  
 Depth to Bottom (ft): 19.43

Project Number: 21010210  
 Date: 5/20/21  
 One Well Volume (gal):           
 QED Controller Settings:           
 Flow Rate (mL/min): 416  
 Length of time Purged (min): 30  
 Condition of Pad/Cover: Good/Good

### PURGING RECORD

Time	Volume Purged (gallons)	DTW (feet)	Temp (°C)	pH (s.u.) ± 0.1	Specific Conductance (ms/cm) ± 3%	Dissolved Oxygen (mg/L) ± 0.3	ORP (mV) ± 10	Turbidity (NTU) ± 10% or < 5	Comments
819	0.0	7.94	23.90	4.51	1.99		239	21.6	
824	0.55	7.94	23.08	8.08	1.99				
829	1.10	7.94	22.33	9.01	1.97		126	14.7	
834	1.65	7.94	21.93	9.25	1.97		66	10.2	
839	2.20	7.94	21.63	9.39	1.99		42	7.12	
844	2.75	7.94	21.64	9.42	1.98		18	6.41	
849	3.30	7.94	21.67	9.52	1.98		11	5.76	
							6	5.43	

### MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter/Order	Container	Perservative	Collected?
<u>CO212A-PZM</u>	<u>855</u>	TCL-VOCs	3 - 40 mL VOA	HCl	
		TPH-GRO	3 - 40 mL VOA	HCl	
		TPH-DRO	2 - 1 L Amber	none	
		TCL-SVOCs	2 - 1 L Amber	none	
		Oil & Grease	2 - 1 L Amber	HCl	
		TAL-Metals & Mercury (total)	1 - 250 mL Plastic	HNO3	
		Hexavalent Chromium (total)	1 - 250 mL Plastic	none	
		Total Cyanide	1 - 250 mL Plastic	NaOH	
		TAL-Metals & Mercury (Dissolved) Field Filtered	1 - 250 mL Plastic	HNO3	
		Hexavalent Chromium (Dissolved) Field Filtered	1 - 250 mL Plastic	none	
PCB	2 - 1 L Amber	None			
Matrix Spike Duplicate					<u>N</u>

Sampled By: LLP

Comments: VOCs + PAH

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft  
 ft x gal/ft = (gal)





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**ATTACHMENT 3**

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May 27, 2021

Mr. Bob Tworkowski  
Tradeport Atlantic  
1600 Sparrow's Point Boulevard  
Sparrows Point, MD 21219

RE: Project: NE Delineation  
Pace Project No.: 30421666

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on May 19, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

This project follows the April 5, 2016 revision 3 Quality Assurance Project Plan for Sparrows Point Terminal Site, Sparrows Point, MD prepared for EnviroAnalytics Group and is not for PA DEP compliance reporting.

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

Sincerely,



Samantha Bayura  
samantha.bayura@pacelabs.com  
(724)850-5622  
Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.  
J.Price, ARM Group Inc.  
Mr. Stewart Kabis, ARM Group Inc.  
Mr. Eric S. Magdar, ARM Group Inc.  
Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: NE Delineation  
Pace Project No.: 30421666

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### **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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: NE Delineation  
Pace Project No.: 30421666

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30421666001	Trip Blank	Water	05/19/21 00:01	05/19/21 22:15
30421666002	CO08C-PZM	Water	05/19/21 08:30	05/19/21 22:15
30421666003	CO08D-PZM	Water	05/19/21 10:25	05/19/21 22:15
30421666004	CO08B-PZM	Water	05/19/21 12:00	05/19/21 22:15
30421666005	CO05C-PZM	Water	05/19/21 13:55	05/19/21 22:15
30421666006	Duplicate	Water	05/19/21 00:01	05/19/21 22:15
30421666007	CO05A-PZM	Water	05/19/21 15:10	05/19/21 22:15

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: NE Delineation

Pace Project No.: 30421666

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30421666001	Trip Blank	EPA 8260B	LEL	55	PASI-PA
30421666002	CO08C-PZM	EPA 8260B	LEL	55	PASI-PA
30421666003	CO08D-PZM	EPA 8260B	LEL	55	PASI-PA
30421666004	CO08B-PZM	EPA 8260B	LEL	55	PASI-PA
30421666005	CO05C-PZM	EPA 8260B	LEL	55	PASI-PA
30421666006	Duplicate	EPA 8260B	LEL	55	PASI-PA
30421666007	CO05A-PZM	EPA 8260B	LEL	55	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: NE Delineation

Pace Project No.: 30421666

---

**Method:** EPA 8260B

**Description:** 8260B MSV

**Client:** Tradepoint Atlantic

**Date:** May 27, 2021

### General Information:

7 samples were analyzed for EPA 8260B by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

QC Batch: 449383

IH: This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.

- BLANK (Lab ID: 2168605)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- CO05A-PZM (Lab ID: 30421666007)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- CO08B-PZM (Lab ID: 30421666004)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- CO08C-PZM (Lab ID: 30421666002)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: NE Delineation  
Pace Project No.: 30421666

---

**Method:** EPA 8260B  
**Description:** 8260B MSV  
**Client:** Tradepoint Atlantic  
**Date:** May 27, 2021

QC Batch: 449383

IH: This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.

- Chloroethane
- Dichlorodifluoromethane
- Isopropylbenzene (Cumene)
- Styrene
- CO08D-PZM (Lab ID: 30421666003)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- Duplicate (Lab ID: 30421666006)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- LCS (Lab ID: 2168606)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- MS (Lab ID: 2168607)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- MSD (Lab ID: 2168608)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: NE Delineation  
Pace Project No.: 30421666

---

**Method:** EPA 8260B  
**Description:** 8260B MSV  
**Client:** Tradepoint Atlantic  
**Date:** May 27, 2021

QC Batch: 449383

IH: This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.

- 1,2-Dichlorobenzene
- Bromodichloromethane
- Chloroethane
- Dichlorodifluoromethane
- Isopropylbenzene (Cumene)
- Styrene
- Trip Blank (Lab ID: 30421666001)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene

QC Batch: 449751

IH: This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.

- BLANK (Lab ID: 2170304)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- CO05C-PZM (Lab ID: 30421666005)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- LCS (Lab ID: 2170305)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: NE Delineation

Pace Project No.: 30421666

---

**Method:** EPA 8260B

**Description:** 8260B MSV

**Client:** Tradepoint Atlantic

**Date:** May 27, 2021

QC Batch: 449751

IH: This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.

- Isopropylbenzene (Cumene)
- Styrene

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

QC Batch: 449383

CL: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.

- BLANK (Lab ID: 2168605)
  - Bromomethane
- CO05A-PZM (Lab ID: 30421666007)
  - Bromomethane
- CO08B-PZM (Lab ID: 30421666004)
  - Bromomethane
- CO08C-PZM (Lab ID: 30421666002)
  - Bromomethane
- CO08D-PZM (Lab ID: 30421666003)
  - Bromomethane
- Duplicate (Lab ID: 30421666006)
  - Bromomethane
- LCS (Lab ID: 2168606)
  - Bromomethane
- MS (Lab ID: 2168607)
  - Bromomethane
- MSD (Lab ID: 2168608)
  - Bromomethane
- Trip Blank (Lab ID: 30421666001)
  - Bromomethane

### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: NE Delineation  
Pace Project No.: 30421666

---

**Method:** EPA 8260B  
**Description:** 8260B MSV  
**Client:** Tradepoint Atlantic  
**Date:** May 27, 2021

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 449383

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30421666003

ML: Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.

- MS (Lab ID: 2168607)
  - 4-Methyl-2-pentanone (MIBK)

R1: RPD value was outside control limits.

- MSD (Lab ID: 2168608)
  - Bromomethane

QC Batch: 449751

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

### Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: NE Delineation

Pace Project No.: 30421666

**Sample: Trip Blank**      **Lab ID: 30421666001**      Collected: 05/19/21 00:01      Received: 05/19/21 22:15      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Acetone	10.0 U	ug/L	10.0	5.6	1		05/24/21 16:35	67-64-1	
Benzene	1.0 U	ug/L	1.0	0.34	1		05/24/21 16:35	71-43-2	
Bromodichloromethane	1.0 U	ug/L	1.0	0.35	1		05/24/21 16:35	75-27-4	IH
Bromoform	1.0 U	ug/L	1.0	0.56	1		05/24/21 16:35	75-25-2	
Bromomethane	1.0 U	ug/L	1.0	0.73	1		05/24/21 16:35	74-83-9	CL
2-Butanone (MEK)	10.0 U	ug/L	10.0	1.5	1		05/24/21 16:35	78-93-3	
Carbon disulfide	1.0 U	ug/L	1.0	0.32	1		05/24/21 16:35	75-15-0	
Carbon tetrachloride	1.0 U	ug/L	1.0	0.44	1		05/24/21 16:35	56-23-5	
Chlorobenzene	1.0 U	ug/L	1.0	0.26	1		05/24/21 16:35	108-90-7	
Chloroethane	1.0 U	ug/L	1.0	0.64	1		05/24/21 16:35	75-00-3	IH
Chloroform	1.0 U	ug/L	1.0	0.39	1		05/24/21 16:35	67-66-3	
Chloromethane	1.0 U	ug/L	1.0	0.40	1		05/24/21 16:35	74-87-3	
Cyclohexane	10.0 U	ug/L	10.0	0.33	1		05/24/21 16:35	110-82-7	
1,2-Dibromo-3-chloropropane	5.0 U	ug/L	5.0	0.55	1		05/24/21 16:35	96-12-8	
Dibromochloromethane	1.0 U	ug/L	1.0	0.43	1		05/24/21 16:35	124-48-1	
1,2-Dibromoethane (EDB)	1.0 U	ug/L	1.0	0.44	1		05/24/21 16:35	106-93-4	
1,2-Dichlorobenzene	1.0 U	ug/L	1.0	0.38	1		05/24/21 16:35	95-50-1	IH
1,3-Dichlorobenzene	1.0 U	ug/L	1.0	0.45	1		05/24/21 16:35	541-73-1	
1,4-Dichlorobenzene	1.0 U	ug/L	1.0	0.48	1		05/24/21 16:35	106-46-7	
Dichlorodifluoromethane	1.0 U	ug/L	1.0	0.63	1		05/24/21 16:35	75-71-8	IH
1,1-Dichloroethane	1.0 U	ug/L	1.0	0.24	1		05/24/21 16:35	75-34-3	
1,2-Dichloroethane	1.0 U	ug/L	1.0	0.33	1		05/24/21 16:35	107-06-2	
1,2-Dichloroethene (Total)	2.0 U	ug/L	2.0	0.66	1		05/24/21 16:35	540-59-0	
1,1-Dichloroethene	1.0 U	ug/L	1.0	0.24	1		05/24/21 16:35	75-35-4	
cis-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.38	1		05/24/21 16:35	156-59-2	
trans-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.28	1		05/24/21 16:35	156-60-5	
1,2-Dichloropropane	1.0 U	ug/L	1.0	0.28	1		05/24/21 16:35	78-87-5	
cis-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.29	1		05/24/21 16:35	10061-01-5	
trans-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.32	1		05/24/21 16:35	10061-02-6	
Ethylbenzene	1.0 U	ug/L	1.0	0.40	1		05/24/21 16:35	100-41-4	
2-Hexanone	10.0 U	ug/L	10.0	0.58	1		05/24/21 16:35	591-78-6	
Isopropylbenzene (Cumene)	1.0 U	ug/L	1.0	0.47	1		05/24/21 16:35	98-82-8	IH
Methyl acetate	5.0 U	ug/L	5.0	0.55	1		05/24/21 16:35	79-20-9	
Methylene Chloride	1.0 U	ug/L	1.0	0.64	1		05/24/21 16:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	10.0 U	ug/L	10.0	0.42	1		05/24/21 16:35	108-10-1	
Methyl-tert-butyl ether	1.0 U	ug/L	1.0	0.25	1		05/24/21 16:35	1634-04-4	
Styrene	1.0 U	ug/L	1.0	0.33	1		05/24/21 16:35	100-42-5	IH
1,1,2,2-Tetrachloroethane	1.0 U	ug/L	1.0	0.47	1		05/24/21 16:35	79-34-5	
Tetrachloroethene	1.0 U	ug/L	1.0	0.39	1		05/24/21 16:35	127-18-4	
Toluene	1.0 U	ug/L	1.0	0.32	1		05/24/21 16:35	108-88-3	
1,2,3-Trichlorobenzene	2.0 U	ug/L	2.0	0.89	1		05/24/21 16:35	87-61-6	
1,2,4-Trichlorobenzene	1.0 U	ug/L	1.0	0.73	1		05/24/21 16:35	120-82-1	IH
1,1,1-Trichloroethane	1.0 U	ug/L	1.0	0.38	1		05/24/21 16:35	71-55-6	IH
1,1,2-Trichloroethane	1.0 U	ug/L	1.0	0.33	1		05/24/21 16:35	79-00-5	
Trichloroethene	1.0 U	ug/L	1.0	0.29	1		05/24/21 16:35	79-01-6	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: NE Delineation  
Pace Project No.: 30421666

Sample: Trip Blank		Lab ID: 30421666001	Collected: 05/19/21 00:01	Received: 05/19/21 22:15	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>		Analytical Method: EPA 8260B Pace Analytical Services - Greensburg							
Trichlorofluoromethane	1.0 U	ug/L	1.0	0.51	1		05/24/21 16:35	75-69-4	
1,1,2-Trichlorotrifluoroethane	50.0 U	ug/L	50.0	3.0	1		05/24/21 16:35	76-13-1	
Vinyl chloride	1.0 U	ug/L	1.0	0.29	1		05/24/21 16:35	75-01-4	
Xylene (Total)	3.0 U	ug/L	3.0	1.4	1		05/24/21 16:35	1330-20-7	
m&p-Xylene	2.0 U	ug/L	2.0	0.94	1		05/24/21 16:35	179601-23-1	
o-Xylene	1.0 U	ug/L	1.0	0.41	1		05/24/21 16:35	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	102	%	70-130		1		05/24/21 16:35	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		05/24/21 16:35	17060-07-0	
Toluene-d8 (S)	91	%	70-130		1		05/24/21 16:35	2037-26-5	
Dibromofluoromethane (S)	113	%	70-130		1		05/24/21 16:35	1868-53-7	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: NE Delineation  
Pace Project No.: 30421666

**Sample: CO08C-PZM**      **Lab ID: 30421666002**      Collected: 05/19/21 08:30      Received: 05/19/21 22:15      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Acetone	10.0 U	ug/L	10.0	5.6	1		05/24/21 22:08	67-64-1	
Benzene	1.0 U	ug/L	1.0	0.34	1		05/24/21 22:08	71-43-2	
Bromodichloromethane	1.0 U	ug/L	1.0	0.35	1		05/24/21 22:08	75-27-4	IH
Bromoform	1.0 U	ug/L	1.0	0.56	1		05/24/21 22:08	75-25-2	
Bromomethane	1.0 U	ug/L	1.0	0.73	1		05/24/21 22:08	74-83-9	CL
2-Butanone (MEK)	10.0 U	ug/L	10.0	1.5	1		05/24/21 22:08	78-93-3	
Carbon disulfide	3.7	ug/L	1.0	0.32	1		05/24/21 22:08	75-15-0	
Carbon tetrachloride	1.0 U	ug/L	1.0	0.44	1		05/24/21 22:08	56-23-5	
Chlorobenzene	1.0 U	ug/L	1.0	0.26	1		05/24/21 22:08	108-90-7	
Chloroethane	1.0 U	ug/L	1.0	0.64	1		05/24/21 22:08	75-00-3	IH
Chloroform	0.88J	ug/L	1.0	0.39	1		05/24/21 22:08	67-66-3	
Chloromethane	1.0 U	ug/L	1.0	0.40	1		05/24/21 22:08	74-87-3	
Cyclohexane	10.0 U	ug/L	10.0	0.33	1		05/24/21 22:08	110-82-7	
1,2-Dibromo-3-chloropropane	5.0 U	ug/L	5.0	0.55	1		05/24/21 22:08	96-12-8	
Dibromochloromethane	1.0 U	ug/L	1.0	0.43	1		05/24/21 22:08	124-48-1	
1,2-Dibromoethane (EDB)	1.0 U	ug/L	1.0	0.44	1		05/24/21 22:08	106-93-4	
1,2-Dichlorobenzene	1.0 U	ug/L	1.0	0.38	1		05/24/21 22:08	95-50-1	IH
1,3-Dichlorobenzene	1.0 U	ug/L	1.0	0.45	1		05/24/21 22:08	541-73-1	
1,4-Dichlorobenzene	1.0 U	ug/L	1.0	0.48	1		05/24/21 22:08	106-46-7	
Dichlorodifluoromethane	1.0 U	ug/L	1.0	0.63	1		05/24/21 22:08	75-71-8	IH
1,1-Dichloroethane	1.0 U	ug/L	1.0	0.24	1		05/24/21 22:08	75-34-3	
1,2-Dichloroethane	1.0 U	ug/L	1.0	0.33	1		05/24/21 22:08	107-06-2	
1,2-Dichloroethene (Total)	2.0 U	ug/L	2.0	0.66	1		05/24/21 22:08	540-59-0	
1,1-Dichloroethene	1.0 U	ug/L	1.0	0.24	1		05/24/21 22:08	75-35-4	
cis-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.38	1		05/24/21 22:08	156-59-2	
trans-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.28	1		05/24/21 22:08	156-60-5	
1,2-Dichloropropane	1.0 U	ug/L	1.0	0.28	1		05/24/21 22:08	78-87-5	
cis-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.29	1		05/24/21 22:08	10061-01-5	
trans-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.32	1		05/24/21 22:08	10061-02-6	
Ethylbenzene	1.0 U	ug/L	1.0	0.40	1		05/24/21 22:08	100-41-4	
2-Hexanone	10.0 U	ug/L	10.0	0.58	1		05/24/21 22:08	591-78-6	
Isopropylbenzene (Cumene)	1.0 U	ug/L	1.0	0.47	1		05/24/21 22:08	98-82-8	IH
Methyl acetate	5.0 U	ug/L	5.0	0.55	1		05/24/21 22:08	79-20-9	
Methylene Chloride	1.0 U	ug/L	1.0	0.64	1		05/24/21 22:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	10.0 U	ug/L	10.0	0.42	1		05/24/21 22:08	108-10-1	
Methyl-tert-butyl ether	1.0 U	ug/L	1.0	0.25	1		05/24/21 22:08	1634-04-4	
Styrene	1.0 U	ug/L	1.0	0.33	1		05/24/21 22:08	100-42-5	IH
1,1,2,2-Tetrachloroethane	1.0 U	ug/L	1.0	0.47	1		05/24/21 22:08	79-34-5	
Tetrachloroethene	1.0 U	ug/L	1.0	0.39	1		05/24/21 22:08	127-18-4	
Toluene	1.0 U	ug/L	1.0	0.32	1		05/24/21 22:08	108-88-3	
1,2,3-Trichlorobenzene	2.0 U	ug/L	2.0	0.89	1		05/24/21 22:08	87-61-6	
1,2,4-Trichlorobenzene	1.0 U	ug/L	1.0	0.73	1		05/24/21 22:08	120-82-1	IH
1,1,1-Trichloroethane	1.0 U	ug/L	1.0	0.38	1		05/24/21 22:08	71-55-6	IH
1,1,2-Trichloroethane	1.0 U	ug/L	1.0	0.33	1		05/24/21 22:08	79-00-5	
Trichloroethene	1.0 U	ug/L	1.0	0.29	1		05/24/21 22:08	79-01-6	

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## ANALYTICAL RESULTS

Project: NE Delineation  
Pace Project No.: 30421666

**Sample: CO08C-PZM**      **Lab ID: 30421666002**      Collected: 05/19/21 08:30      Received: 05/19/21 22:15      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Trichlorofluoromethane	<b>1.0 U</b>	ug/L	1.0	0.51	1		05/24/21 22:08	75-69-4	
1,1,2-Trichlorotrifluoroethane	<b>50.0 U</b>	ug/L	50.0	3.0	1		05/24/21 22:08	76-13-1	
Vinyl chloride	<b>1.0 U</b>	ug/L	1.0	0.29	1		05/24/21 22:08	75-01-4	
Xylene (Total)	<b>2.4J</b>	ug/L	3.0	1.4	1		05/24/21 22:08	1330-20-7	
m&p-Xylene	<b>1.6J</b>	ug/L	2.0	0.94	1		05/24/21 22:08	179601-23-1	
o-Xylene	<b>0.77J</b>	ug/L	1.0	0.41	1		05/24/21 22:08	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		1		05/24/21 22:08	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		05/24/21 22:08	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		05/24/21 22:08	2037-26-5	
Dibromofluoromethane (S)	106	%	70-130		1		05/24/21 22:08	1868-53-7	

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### ANALYTICAL RESULTS

Project: NE Delineation  
Pace Project No.: 30421666

**Sample: CO08D-PZM**      **Lab ID: 30421666003**      Collected: 05/19/21 10:25      Received: 05/19/21 22:15      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Acetone	8.8J	ug/L	10.0	5.6	1		05/24/21 22:34	67-64-1	
Benzene	9.0	ug/L	1.0	0.34	1		05/24/21 22:34	71-43-2	
Bromodichloromethane	1.0 U	ug/L	1.0	0.35	1		05/24/21 22:34	75-27-4	IH
Bromoform	1.0 U	ug/L	1.0	0.56	1		05/24/21 22:34	75-25-2	
Bromomethane	1.0 U	ug/L	1.0	0.73	1		05/24/21 22:34	74-83-9	CL,R1
2-Butanone (MEK)	10.0 U	ug/L	10.0	1.5	1		05/24/21 22:34	78-93-3	
Carbon disulfide	1.0 U	ug/L	1.0	0.32	1		05/24/21 22:34	75-15-0	
Carbon tetrachloride	1.0 U	ug/L	1.0	0.44	1		05/24/21 22:34	56-23-5	
Chlorobenzene	1.0 U	ug/L	1.0	0.26	1		05/24/21 22:34	108-90-7	
Chloroethane	1.0 U	ug/L	1.0	0.64	1		05/24/21 22:34	75-00-3	IH
Chloroform	8.7	ug/L	1.0	0.39	1		05/24/21 22:34	67-66-3	
Chloromethane	1.0 U	ug/L	1.0	0.40	1		05/24/21 22:34	74-87-3	
Cyclohexane	10.0 U	ug/L	10.0	0.33	1		05/24/21 22:34	110-82-7	
1,2-Dibromo-3-chloropropane	5.0 U	ug/L	5.0	0.55	1		05/24/21 22:34	96-12-8	
Dibromochloromethane	1.0 U	ug/L	1.0	0.43	1		05/24/21 22:34	124-48-1	
1,2-Dibromoethane (EDB)	1.0 U	ug/L	1.0	0.44	1		05/24/21 22:34	106-93-4	
1,2-Dichlorobenzene	1.0 U	ug/L	1.0	0.38	1		05/24/21 22:34	95-50-1	IH
1,3-Dichlorobenzene	1.0 U	ug/L	1.0	0.45	1		05/24/21 22:34	541-73-1	
1,4-Dichlorobenzene	1.0 U	ug/L	1.0	0.48	1		05/24/21 22:34	106-46-7	
Dichlorodifluoromethane	1.0 U	ug/L	1.0	0.63	1		05/24/21 22:34	75-71-8	IH
1,1-Dichloroethane	1.0 U	ug/L	1.0	0.24	1		05/24/21 22:34	75-34-3	
1,2-Dichloroethane	1.0 U	ug/L	1.0	0.33	1		05/24/21 22:34	107-06-2	
1,2-Dichloroethene (Total)	2.0 U	ug/L	2.0	0.66	1		05/24/21 22:34	540-59-0	
1,1-Dichloroethene	1.0 U	ug/L	1.0	0.24	1		05/24/21 22:34	75-35-4	
cis-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.38	1		05/24/21 22:34	156-59-2	
trans-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.28	1		05/24/21 22:34	156-60-5	
1,2-Dichloropropane	1.0 U	ug/L	1.0	0.28	1		05/24/21 22:34	78-87-5	
cis-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.29	1		05/24/21 22:34	10061-01-5	
trans-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.32	1		05/24/21 22:34	10061-02-6	
Ethylbenzene	1.0 U	ug/L	1.0	0.40	1		05/24/21 22:34	100-41-4	
2-Hexanone	10.0 U	ug/L	10.0	0.58	1		05/24/21 22:34	591-78-6	
Isopropylbenzene (Cumene)	1.0 U	ug/L	1.0	0.47	1		05/24/21 22:34	98-82-8	IH
Methyl acetate	5.0 U	ug/L	5.0	0.55	1		05/24/21 22:34	79-20-9	
Methylene Chloride	1.2	ug/L	1.0	0.64	1		05/24/21 22:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	10.0 U	ug/L	10.0	0.42	1		05/24/21 22:34	108-10-1	ML
Methyl-tert-butyl ether	1.0 U	ug/L	1.0	0.25	1		05/24/21 22:34	1634-04-4	
Styrene	1.0 U	ug/L	1.0	0.33	1		05/24/21 22:34	100-42-5	IH
1,1,2,2-Tetrachloroethane	1.0 U	ug/L	1.0	0.47	1		05/24/21 22:34	79-34-5	
Tetrachloroethene	1.0 U	ug/L	1.0	0.39	1		05/24/21 22:34	127-18-4	
Toluene	1.5	ug/L	1.0	0.32	1		05/24/21 22:34	108-88-3	
1,2,3-Trichlorobenzene	2.0 U	ug/L	2.0	0.89	1		05/24/21 22:34	87-61-6	
1,2,4-Trichlorobenzene	1.0 U	ug/L	1.0	0.73	1		05/24/21 22:34	120-82-1	IH
1,1,1-Trichloroethane	1.0 U	ug/L	1.0	0.38	1		05/24/21 22:34	71-55-6	IH
1,1,2-Trichloroethane	1.0 U	ug/L	1.0	0.33	1		05/24/21 22:34	79-00-5	
Trichloroethene	1.0 U	ug/L	1.0	0.29	1		05/24/21 22:34	79-01-6	

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### ANALYTICAL RESULTS

Project: NE Delineation  
Pace Project No.: 30421666

**Sample: CO08D-PZM**      **Lab ID: 30421666003**      Collected: 05/19/21 10:25      Received: 05/19/21 22:15      Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Trichlorofluoromethane	1.0 U	ug/L	1.0	0.51	1		05/24/21 22:34	75-69-4	
1,1,2-Trichlorotrifluoroethane	50.0 U	ug/L	50.0	3.0	1		05/24/21 22:34	76-13-1	
Vinyl chloride	1.0 U	ug/L	1.0	0.29	1		05/24/21 22:34	75-01-4	
Xylene (Total)	3.0 U	ug/L	3.0	1.4	1		05/24/21 22:34	1330-20-7	
m&p-Xylene	2.0 U	ug/L	2.0	0.94	1		05/24/21 22:34	179601-23-1	
o-Xylene	1.0 U	ug/L	1.0	0.41	1		05/24/21 22:34	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	70-130		1		05/24/21 22:34	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		05/24/21 22:34	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		05/24/21 22:34	2037-26-5	
Dibromofluoromethane (S)	105	%	70-130		1		05/24/21 22:34	1868-53-7	

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### ANALYTICAL RESULTS

Project: NE Delineation

Pace Project No.: 30421666

**Sample: CO08B-PZM**      **Lab ID: 30421666004**      Collected: 05/19/21 12:00      Received: 05/19/21 22:15      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Acetone	10.0 U	ug/L	10.0	5.6	1		05/24/21 22:59	67-64-1	
Benzene	5240	ug/L	100	33.8	100		05/26/21 20:34	71-43-2	
Bromodichloromethane	1.0 U	ug/L	1.0	0.35	1		05/24/21 22:59	75-27-4	IH
Bromoform	1.0 U	ug/L	1.0	0.56	1		05/24/21 22:59	75-25-2	
Bromomethane	1.0 U	ug/L	1.0	0.73	1		05/24/21 22:59	74-83-9	CL
2-Butanone (MEK)	10.0 U	ug/L	10.0	1.5	1		05/24/21 22:59	78-93-3	
Carbon disulfide	1.0 U	ug/L	1.0	0.32	1		05/24/21 22:59	75-15-0	
Carbon tetrachloride	1.0 U	ug/L	1.0	0.44	1		05/24/21 22:59	56-23-5	
Chlorobenzene	1.0 U	ug/L	1.0	0.26	1		05/24/21 22:59	108-90-7	
Chloroethane	1.0 U	ug/L	1.0	0.64	1		05/24/21 22:59	75-00-3	IH
Chloroform	1.0 U	ug/L	1.0	0.39	1		05/24/21 22:59	67-66-3	
Chloromethane	1.0 U	ug/L	1.0	0.40	1		05/24/21 22:59	74-87-3	
Cyclohexane	1.6J	ug/L	10.0	0.33	1		05/24/21 22:59	110-82-7	
1,2-Dibromo-3-chloropropane	5.0 U	ug/L	5.0	0.55	1		05/24/21 22:59	96-12-8	
Dibromochloromethane	1.0 U	ug/L	1.0	0.43	1		05/24/21 22:59	124-48-1	
1,2-Dibromoethane (EDB)	1.0 U	ug/L	1.0	0.44	1		05/24/21 22:59	106-93-4	
1,2-Dichlorobenzene	1.0 U	ug/L	1.0	0.38	1		05/24/21 22:59	95-50-1	IH
1,3-Dichlorobenzene	1.0 U	ug/L	1.0	0.45	1		05/24/21 22:59	541-73-1	
1,4-Dichlorobenzene	1.0 U	ug/L	1.0	0.48	1		05/24/21 22:59	106-46-7	
Dichlorodifluoromethane	1.0 U	ug/L	1.0	0.63	1		05/24/21 22:59	75-71-8	IH
1,1-Dichloroethane	1.0 U	ug/L	1.0	0.24	1		05/24/21 22:59	75-34-3	
1,2-Dichloroethane	1.0 U	ug/L	1.0	0.33	1		05/24/21 22:59	107-06-2	
1,2-Dichloroethene (Total)	2.0 U	ug/L	2.0	0.66	1		05/24/21 22:59	540-59-0	
1,1-Dichloroethene	1.0 U	ug/L	1.0	0.24	1		05/24/21 22:59	75-35-4	
cis-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.38	1		05/24/21 22:59	156-59-2	
trans-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.28	1		05/24/21 22:59	156-60-5	
1,2-Dichloropropane	1.0 U	ug/L	1.0	0.28	1		05/24/21 22:59	78-87-5	
cis-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.29	1		05/24/21 22:59	10061-01-5	
trans-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.32	1		05/24/21 22:59	10061-02-6	
Ethylbenzene	211	ug/L	1.0	0.40	1		05/24/21 22:59	100-41-4	
2-Hexanone	10.0 U	ug/L	10.0	0.58	1		05/24/21 22:59	591-78-6	
Isopropylbenzene (Cumene)	6.6	ug/L	1.0	0.47	1		05/24/21 22:59	98-82-8	IH
Methyl acetate	5.0 U	ug/L	5.0	0.55	1		05/24/21 22:59	79-20-9	
Methylene Chloride	1.0 U	ug/L	1.0	0.64	1		05/24/21 22:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	10.0 U	ug/L	10.0	0.42	1		05/24/21 22:59	108-10-1	
Methyl-tert-butyl ether	1.0 U	ug/L	1.0	0.25	1		05/24/21 22:59	1634-04-4	
Styrene	143	ug/L	1.0	0.33	1		05/24/21 22:59	100-42-5	IH
1,1,2,2-Tetrachloroethane	1.0 U	ug/L	1.0	0.47	1		05/24/21 22:59	79-34-5	
Tetrachloroethene	1.0 U	ug/L	1.0	0.39	1		05/24/21 22:59	127-18-4	
Toluene	2470	ug/L	100	31.7	100		05/26/21 20:34	108-88-3	
1,2,3-Trichlorobenzene	2.0 U	ug/L	2.0	0.89	1		05/24/21 22:59	87-61-6	
1,2,4-Trichlorobenzene	1.0 U	ug/L	1.0	0.73	1		05/24/21 22:59	120-82-1	IH
1,1,1-Trichloroethane	1.0 U	ug/L	1.0	0.38	1		05/24/21 22:59	71-55-6	IH
1,1,2-Trichloroethane	1.0 U	ug/L	1.0	0.33	1		05/24/21 22:59	79-00-5	
Trichloroethene	1.0 U	ug/L	1.0	0.29	1		05/24/21 22:59	79-01-6	

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## ANALYTICAL RESULTS

Project: NE Delineation

Pace Project No.: 30421666

**Sample: CO08B-PZM**      **Lab ID: 30421666004**      Collected: 05/19/21 12:00      Received: 05/19/21 22:15      Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Trichlorofluoromethane	<b>1.0 U</b>	ug/L	1.0	0.51	1		05/24/21 22:59	75-69-4	
1,1,2-Trichlorotrifluoroethane	<b>50.0 U</b>	ug/L	50.0	3.0	1		05/24/21 22:59	76-13-1	
Vinyl chloride	<b>1.0 U</b>	ug/L	1.0	0.29	1		05/24/21 22:59	75-01-4	
Xylene (Total)	<b>1480</b>	ug/L	300	135	100		05/26/21 20:34	1330-20-7	
m&p-Xylene	<b>969</b>	ug/L	200	94.2	100		05/26/21 20:34	179601-23-1	
o-Xylene	<b>506</b>	ug/L	100	40.9	100		05/26/21 20:34	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	89	%	70-130		1		05/24/21 22:59	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		05/24/21 22:59	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		05/24/21 22:59	2037-26-5	
Dibromofluoromethane (S)	97	%	70-130		1		05/24/21 22:59	1868-53-7	

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### ANALYTICAL RESULTS

Project: NE Delineation  
Pace Project No.: 30421666

**Sample: CO05C-PZM**      **Lab ID: 30421666005**      Collected: 05/19/21 13:55      Received: 05/19/21 22:15      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Acetone	14.1	ug/L	10.0	5.6	1	05/26/21 18:02	67-64-1	M5	
Benzene	3.8	ug/L	1.0	0.34	1	05/26/21 18:02	71-43-2	M5	
Bromodichloromethane	1.0 U	ug/L	1.0	0.35	1	05/26/21 18:02	75-27-4	IH,M5	
Bromoform	1.0 U	ug/L	1.0	0.56	1	05/26/21 18:02	75-25-2	M5	
Bromomethane	1.0 U	ug/L	1.0	0.73	1	05/26/21 18:02	74-83-9	M5	
2-Butanone (MEK)	10.0 U	ug/L	10.0	1.5	1	05/26/21 18:02	78-93-3	M5	
Carbon disulfide	0.86J	ug/L	1.0	0.32	1	05/26/21 18:02	75-15-0	M5	
Carbon tetrachloride	1.0 U	ug/L	1.0	0.44	1	05/26/21 18:02	56-23-5	M5	
Chlorobenzene	1.0 U	ug/L	1.0	0.26	1	05/26/21 18:02	108-90-7	M5	
Chloroethane	1.0 U	ug/L	1.0	0.64	1	05/26/21 18:02	75-00-3	IH,M5	
Chloroform	1.0 U	ug/L	1.0	0.39	1	05/26/21 18:02	67-66-3	M5	
Chloromethane	1.0 U	ug/L	1.0	0.40	1	05/26/21 18:02	74-87-3	M5	
Cyclohexane	10.0 U	ug/L	10.0	0.33	1	05/26/21 18:02	110-82-7	M5	
1,2-Dibromo-3-chloropropane	5.0 U	ug/L	5.0	0.55	1	05/26/21 18:02	96-12-8	M5	
Dibromochloromethane	1.0 U	ug/L	1.0	0.43	1	05/26/21 18:02	124-48-1	M5	
1,2-Dibromoethane (EDB)	1.0 U	ug/L	1.0	0.44	1	05/26/21 18:02	106-93-4	M5	
1,2-Dichlorobenzene	1.0 U	ug/L	1.0	0.38	1	05/26/21 18:02	95-50-1	IH,M5	
1,3-Dichlorobenzene	1.0 U	ug/L	1.0	0.45	1	05/26/21 18:02	541-73-1	M5	
1,4-Dichlorobenzene	1.0 U	ug/L	1.0	0.48	1	05/26/21 18:02	106-46-7	M5	
Dichlorodifluoromethane	1.0 U	ug/L	1.0	0.63	1	05/26/21 18:02	75-71-8	IH,M5	
1,1-Dichloroethane	1.0 U	ug/L	1.0	0.24	1	05/26/21 18:02	75-34-3	M5	
1,2-Dichloroethane	1.0 U	ug/L	1.0	0.33	1	05/26/21 18:02	107-06-2	M5	
1,2-Dichloroethene (Total)	2.0 U	ug/L	2.0	0.66	1	05/26/21 18:02	540-59-0	M5	
1,1-Dichloroethene	1.0 U	ug/L	1.0	0.24	1	05/26/21 18:02	75-35-4	M5	
cis-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.38	1	05/26/21 18:02	156-59-2	M5	
trans-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.28	1	05/26/21 18:02	156-60-5	M5	
1,2-Dichloropropane	1.0 U	ug/L	1.0	0.28	1	05/26/21 18:02	78-87-5	M5	
cis-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.29	1	05/26/21 18:02	10061-01-5	M5	
trans-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.32	1	05/26/21 18:02	10061-02-6	M5	
Ethylbenzene	1.0	ug/L	1.0	0.40	1	05/26/21 18:02	100-41-4	M5	
2-Hexanone	10.0 U	ug/L	10.0	0.58	1	05/26/21 18:02	591-78-6	M5	
Isopropylbenzene (Cumene)	1.0 U	ug/L	1.0	0.47	1	05/26/21 18:02	98-82-8	IH,M5	
Methyl acetate	5.0 U	ug/L	5.0	0.55	1	05/26/21 18:02	79-20-9	M5	
Methylene Chloride	1.0 U	ug/L	1.0	0.64	1	05/26/21 18:02	75-09-2	M5	
4-Methyl-2-pentanone (MIBK)	10.0 U	ug/L	10.0	0.42	1	05/26/21 18:02	108-10-1	M5	
Methyl-tert-butyl ether	1.0 U	ug/L	1.0	0.25	1	05/26/21 18:02	1634-04-4	M5	
Styrene	1.0 U	ug/L	1.0	0.33	1	05/26/21 18:02	100-42-5	IH,M5	
1,1,2,2-Tetrachloroethane	1.0 U	ug/L	1.0	0.47	1	05/26/21 18:02	79-34-5	M5	
Tetrachloroethene	1.0 U	ug/L	1.0	0.39	1	05/26/21 18:02	127-18-4	M5	
Toluene	0.47J	ug/L	1.0	0.32	1	05/26/21 18:02	108-88-3	M5	
1,2,3-Trichlorobenzene	2.0 U	ug/L	2.0	0.89	1	05/26/21 18:02	87-61-6	M5	
1,2,4-Trichlorobenzene	1.0 U	ug/L	1.0	0.73	1	05/26/21 18:02	120-82-1	IH,M5	
1,1,1-Trichloroethane	1.0 U	ug/L	1.0	0.38	1	05/26/21 18:02	71-55-6	IH,M5	
1,1,2-Trichloroethane	1.0 U	ug/L	1.0	0.33	1	05/26/21 18:02	79-00-5	M5	
Trichloroethene	1.0 U	ug/L	1.0	0.29	1	05/26/21 18:02	79-01-6	M5	

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## ANALYTICAL RESULTS

Project: NE Delineation  
Pace Project No.: 30421666

Sample: CO05C-PZM      Lab ID: 30421666005      Collected: 05/19/21 13:55      Received: 05/19/21 22:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Trichlorofluoromethane	1.0 U	ug/L	1.0	0.51	1		05/26/21 18:02	75-69-4	M5
1,1,2-Trichlorotrifluoroethane	50.0 U	ug/L	50.0	3.0	1		05/26/21 18:02	76-13-1	M5
Vinyl chloride	1.0 U	ug/L	1.0	0.29	1		05/26/21 18:02	75-01-4	M5
Xylene (Total)	3.0 U	ug/L	3.0	1.4	1		05/26/21 18:02	1330-20-7	M5
m&p-Xylene	2.0 U	ug/L	2.0	0.94	1		05/26/21 18:02	179601-23-1	M5
o-Xylene	1.0 U	ug/L	1.0	0.41	1		05/26/21 18:02	95-47-6	M5
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	70-130		1		05/26/21 18:02	460-00-4	M5
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		05/26/21 18:02	17060-07-0	M5
Toluene-d8 (S)	93	%	70-130		1		05/26/21 18:02	2037-26-5	M5
Dibromofluoromethane (S)	111	%	70-130		1		05/26/21 18:02	1868-53-7	M5

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### ANALYTICAL RESULTS

Project: NE Delineation

Pace Project No.: 30421666

Sample: Duplicate									
Lab ID: 30421666006 Collected: 05/19/21 00:01 Received: 05/19/21 22:15 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Acetone	10.0 U	ug/L	10.0	5.6	1		05/24/21 23:49	67-64-1	
Benzene	5910	ug/L	100	33.8	100		05/26/21 20:59	71-43-2	
Bromodichloromethane	1.0 U	ug/L	1.0	0.35	1		05/24/21 23:49	75-27-4	IH
Bromoform	1.0 U	ug/L	1.0	0.56	1		05/24/21 23:49	75-25-2	
Bromomethane	1.0 U	ug/L	1.0	0.73	1		05/24/21 23:49	74-83-9	CL
2-Butanone (MEK)	10.0 U	ug/L	10.0	1.5	1		05/24/21 23:49	78-93-3	
Carbon disulfide	1.0 U	ug/L	1.0	0.32	1		05/24/21 23:49	75-15-0	
Carbon tetrachloride	1.0 U	ug/L	1.0	0.44	1		05/24/21 23:49	56-23-5	
Chlorobenzene	1.0 U	ug/L	1.0	0.26	1		05/24/21 23:49	108-90-7	
Chloroethane	1.0 U	ug/L	1.0	0.64	1		05/24/21 23:49	75-00-3	IH
Chloroform	1.0 U	ug/L	1.0	0.39	1		05/24/21 23:49	67-66-3	
Chloromethane	1.0 U	ug/L	1.0	0.40	1		05/24/21 23:49	74-87-3	
Cyclohexane	1.5J	ug/L	10.0	0.33	1		05/24/21 23:49	110-82-7	
1,2-Dibromo-3-chloropropane	5.0 U	ug/L	5.0	0.55	1		05/24/21 23:49	96-12-8	
Dibromochloromethane	1.0 U	ug/L	1.0	0.43	1		05/24/21 23:49	124-48-1	
1,2-Dibromoethane (EDB)	1.0 U	ug/L	1.0	0.44	1		05/24/21 23:49	106-93-4	
1,2-Dichlorobenzene	1.0 U	ug/L	1.0	0.38	1		05/24/21 23:49	95-50-1	IH
1,3-Dichlorobenzene	1.0 U	ug/L	1.0	0.45	1		05/24/21 23:49	541-73-1	
1,4-Dichlorobenzene	1.0 U	ug/L	1.0	0.48	1		05/24/21 23:49	106-46-7	
Dichlorodifluoromethane	1.0 U	ug/L	1.0	0.63	1		05/24/21 23:49	75-71-8	IH
1,1-Dichloroethane	1.0 U	ug/L	1.0	0.24	1		05/24/21 23:49	75-34-3	
1,2-Dichloroethane	1.0 U	ug/L	1.0	0.33	1		05/24/21 23:49	107-06-2	
1,2-Dichloroethene (Total)	2.0 U	ug/L	2.0	0.66	1		05/24/21 23:49	540-59-0	
1,1-Dichloroethene	1.0 U	ug/L	1.0	0.24	1		05/24/21 23:49	75-35-4	
cis-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.38	1		05/24/21 23:49	156-59-2	
trans-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.28	1		05/24/21 23:49	156-60-5	
1,2-Dichloropropane	1.0 U	ug/L	1.0	0.28	1		05/24/21 23:49	78-87-5	
cis-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.29	1		05/24/21 23:49	10061-01-5	
trans-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.32	1		05/24/21 23:49	10061-02-6	
Ethylbenzene	216	ug/L	1.0	0.40	1		05/24/21 23:49	100-41-4	
2-Hexanone	10.0 U	ug/L	10.0	0.58	1		05/24/21 23:49	591-78-6	
Isopropylbenzene (Cumene)	6.9	ug/L	1.0	0.47	1		05/24/21 23:49	98-82-8	IH
Methyl acetate	5.0 U	ug/L	5.0	0.55	1		05/24/21 23:49	79-20-9	
Methylene Chloride	1.0 U	ug/L	1.0	0.64	1		05/24/21 23:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	10.0 U	ug/L	10.0	0.42	1		05/24/21 23:49	108-10-1	
Methyl-tert-butyl ether	1.0 U	ug/L	1.0	0.25	1		05/24/21 23:49	1634-04-4	
Styrene	144	ug/L	1.0	0.33	1		05/24/21 23:49	100-42-5	IH
1,1,2,2-Tetrachloroethane	1.0 U	ug/L	1.0	0.47	1		05/24/21 23:49	79-34-5	
Tetrachloroethene	1.0 U	ug/L	1.0	0.39	1		05/24/21 23:49	127-18-4	
Toluene	2810	ug/L	100	31.7	100		05/26/21 20:59	108-88-3	
1,2,3-Trichlorobenzene	2.0 U	ug/L	2.0	0.89	1		05/24/21 23:49	87-61-6	
1,2,4-Trichlorobenzene	1.0 U	ug/L	1.0	0.73	1		05/24/21 23:49	120-82-1	IH
1,1,1-Trichloroethane	1.0 U	ug/L	1.0	0.38	1		05/24/21 23:49	71-55-6	IH
1,1,2-Trichloroethane	1.0 U	ug/L	1.0	0.33	1		05/24/21 23:49	79-00-5	
Trichloroethene	1.0 U	ug/L	1.0	0.29	1		05/24/21 23:49	79-01-6	

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### ANALYTICAL RESULTS

Project: NE Delineation  
Pace Project No.: 30421666

Sample: Duplicate		Lab ID: 30421666006		Collected: 05/19/21 00:01		Received: 05/19/21 22:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>		Analytical Method: EPA 8260B Pace Analytical Services - Greensburg							
Trichlorofluoromethane	<b>1.0 U</b>	ug/L	1.0	0.51	1		05/24/21 23:49	75-69-4	
1,1,2-Trichlorotrifluoroethane	<b>50.0 U</b>	ug/L	50.0	3.0	1		05/24/21 23:49	76-13-1	
Vinyl chloride	<b>1.0 U</b>	ug/L	1.0	0.29	1		05/24/21 23:49	75-01-4	
Xylene (Total)	<b>1670</b>	ug/L	300	135	100		05/26/21 20:59	1330-20-7	
m&p-Xylene	<b>1110</b>	ug/L	200	94.2	100		05/26/21 20:59	179601-23-1	
o-Xylene	<b>551</b>	ug/L	100	40.9	100		05/26/21 20:59	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	94	%	70-130		1		05/24/21 23:49	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		05/24/21 23:49	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		05/24/21 23:49	2037-26-5	
Dibromofluoromethane (S)	93	%	70-130		1		05/24/21 23:49	1868-53-7	

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## ANALYTICAL RESULTS

Project: NE Delineation

Pace Project No.: 30421666

**Sample: CO05A-PZM**      **Lab ID: 30421666007**      Collected: 05/19/21 15:10      Received: 05/19/21 22:15      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Acetone	7.9J	ug/L	10.0	5.6	1		05/25/21 00:15	67-64-1	
Benzene	1330	ug/L	100	33.8	100		05/26/21 21:24	71-43-2	
Bromodichloromethane	1.0 U	ug/L	1.0	0.35	1		05/25/21 00:15	75-27-4	IH
Bromoform	1.0 U	ug/L	1.0	0.56	1		05/25/21 00:15	75-25-2	
Bromomethane	1.0 U	ug/L	1.0	0.73	1		05/25/21 00:15	74-83-9	CL
2-Butanone (MEK)	10.0 U	ug/L	10.0	1.5	1		05/25/21 00:15	78-93-3	
Carbon disulfide	0.93J	ug/L	1.0	0.32	1		05/25/21 00:15	75-15-0	
Carbon tetrachloride	1.0 U	ug/L	1.0	0.44	1		05/25/21 00:15	56-23-5	
Chlorobenzene	1.0 U	ug/L	1.0	0.26	1		05/25/21 00:15	108-90-7	
Chloroethane	1.0 U	ug/L	1.0	0.64	1		05/25/21 00:15	75-00-3	IH
Chloroform	1.0 U	ug/L	1.0	0.39	1		05/25/21 00:15	67-66-3	
Chloromethane	1.0 U	ug/L	1.0	0.40	1		05/25/21 00:15	74-87-3	
Cyclohexane	1.1J	ug/L	10.0	0.33	1		05/25/21 00:15	110-82-7	
1,2-Dibromo-3-chloropropane	5.0 U	ug/L	5.0	0.55	1		05/25/21 00:15	96-12-8	
Dibromochloromethane	1.0 U	ug/L	1.0	0.43	1		05/25/21 00:15	124-48-1	
1,2-Dibromoethane (EDB)	1.0 U	ug/L	1.0	0.44	1		05/25/21 00:15	106-93-4	
1,2-Dichlorobenzene	1.0 U	ug/L	1.0	0.38	1		05/25/21 00:15	95-50-1	IH
1,3-Dichlorobenzene	1.0 U	ug/L	1.0	0.45	1		05/25/21 00:15	541-73-1	
1,4-Dichlorobenzene	1.0 U	ug/L	1.0	0.48	1		05/25/21 00:15	106-46-7	
Dichlorodifluoromethane	1.0 U	ug/L	1.0	0.63	1		05/25/21 00:15	75-71-8	IH
1,1-Dichloroethane	1.0 U	ug/L	1.0	0.24	1		05/25/21 00:15	75-34-3	
1,2-Dichloroethane	1.0 U	ug/L	1.0	0.33	1		05/25/21 00:15	107-06-2	
1,2-Dichloroethene (Total)	2.0 U	ug/L	2.0	0.66	1		05/25/21 00:15	540-59-0	
1,1-Dichloroethene	1.0 U	ug/L	1.0	0.24	1		05/25/21 00:15	75-35-4	
cis-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.38	1		05/25/21 00:15	156-59-2	
trans-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.28	1		05/25/21 00:15	156-60-5	
1,2-Dichloropropane	1.0 U	ug/L	1.0	0.28	1		05/25/21 00:15	78-87-5	
cis-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.29	1		05/25/21 00:15	10061-01-5	
trans-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.32	1		05/25/21 00:15	10061-02-6	
Ethylbenzene	71.8	ug/L	1.0	0.40	1		05/25/21 00:15	100-41-4	
2-Hexanone	10.0 U	ug/L	10.0	0.58	1		05/25/21 00:15	591-78-6	
Isopropylbenzene (Cumene)	6.2	ug/L	1.0	0.47	1		05/25/21 00:15	98-82-8	IH
Methyl acetate	5.0 U	ug/L	5.0	0.55	1		05/25/21 00:15	79-20-9	
Methylene Chloride	1.0 U	ug/L	1.0	0.64	1		05/25/21 00:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	10.0 U	ug/L	10.0	0.42	1		05/25/21 00:15	108-10-1	
Methyl-tert-butyl ether	1.0 U	ug/L	1.0	0.25	1		05/25/21 00:15	1634-04-4	
Styrene	152	ug/L	1.0	0.33	1		05/25/21 00:15	100-42-5	IH
1,1,2,2-Tetrachloroethane	1.0 U	ug/L	1.0	0.47	1		05/25/21 00:15	79-34-5	
Tetrachloroethene	1.0 U	ug/L	1.0	0.39	1		05/25/21 00:15	127-18-4	
Toluene	597	ug/L	100	31.7	100		05/26/21 21:24	108-88-3	
1,2,3-Trichlorobenzene	2.0 U	ug/L	2.0	0.89	1		05/25/21 00:15	87-61-6	
1,2,4-Trichlorobenzene	1.0 U	ug/L	1.0	0.73	1		05/25/21 00:15	120-82-1	IH
1,1,1-Trichloroethane	1.0 U	ug/L	1.0	0.38	1		05/25/21 00:15	71-55-6	IH
1,1,2-Trichloroethane	1.0 U	ug/L	1.0	0.33	1		05/25/21 00:15	79-00-5	
Trichloroethene	1.0 U	ug/L	1.0	0.29	1		05/25/21 00:15	79-01-6	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NE Delineation  
Pace Project No.: 30421666

Sample: CO05A-PZM		Lab ID: 30421666007		Collected: 05/19/21 15:10	Received: 05/19/21 22:15	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>		Analytical Method: EPA 8260B Pace Analytical Services - Greensburg							
Trichlorofluoromethane	<b>1.0 U</b>	ug/L	1.0	0.51	1		05/25/21 00:15	75-69-4	
1,1,2-Trichlorotrifluoroethane	<b>50.0 U</b>	ug/L	50.0	3.0	1		05/25/21 00:15	76-13-1	
Vinyl chloride	<b>1.0 U</b>	ug/L	1.0	0.29	1		05/25/21 00:15	75-01-4	
Xylene (Total)	<b>1080</b>	ug/L	3.0	1.4	1		05/25/21 00:15	1330-20-7	
m&p-Xylene	<b>774</b>	ug/L	2.0	0.94	1		05/25/21 00:15	179601-23-1	
o-Xylene	<b>308</b>	ug/L	1.0	0.41	1		05/25/21 00:15	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	70-130		1		05/25/21 00:15	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		05/25/21 00:15	17060-07-0	
Toluene-d8 (S)	93	%	70-130		1		05/25/21 00:15	2037-26-5	
Dibromofluoromethane (S)	98	%	70-130		1		05/25/21 00:15	1868-53-7	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: NE Delineation  
Pace Project No.: 30421666

QC Batch: 449383 Analysis Method: EPA 8260B  
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV  
Laboratory: Pace Analytical Services - Greensburg  
Associated Lab Samples: 30421666001, 30421666002, 30421666003, 30421666004, 30421666006, 30421666007

METHOD BLANK: 2168605 Matrix: Water  
Associated Lab Samples: 30421666001, 30421666002, 30421666003, 30421666004, 30421666006, 30421666007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	1.0 U	1.0	0.38	05/24/21 15:17	IH
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0	0.47	05/24/21 15:17	
1,1,2-Trichloroethane	ug/L	1.0 U	1.0	0.33	05/24/21 15:17	
1,1,2-Trichlorotrifluoroethane	ug/L	50.0 U	50.0	3.0	05/24/21 15:17	
1,1-Dichloroethane	ug/L	1.0 U	1.0	0.24	05/24/21 15:17	
1,1-Dichloroethene	ug/L	1.0 U	1.0	0.24	05/24/21 15:17	
1,2,3-Trichlorobenzene	ug/L	2.0 U	2.0	0.89	05/24/21 15:17	
1,2,4-Trichlorobenzene	ug/L	1.0 U	1.0	0.73	05/24/21 15:17	IH
1,2-Dibromo-3-chloropropane	ug/L	5.0 U	5.0	0.55	05/24/21 15:17	
1,2-Dibromoethane (EDB)	ug/L	1.0 U	1.0	0.44	05/24/21 15:17	
1,2-Dichlorobenzene	ug/L	1.0 U	1.0	0.38	05/24/21 15:17	IH
1,2-Dichloroethane	ug/L	1.0 U	1.0	0.33	05/24/21 15:17	
1,2-Dichloroethene (Total)	ug/L	2.0 U	2.0	0.66	05/24/21 15:17	
1,2-Dichloropropane	ug/L	1.0 U	1.0	0.28	05/24/21 15:17	
1,3-Dichlorobenzene	ug/L	1.0 U	1.0	0.45	05/24/21 15:17	
1,4-Dichlorobenzene	ug/L	1.0 U	1.0	0.48	05/24/21 15:17	
2-Butanone (MEK)	ug/L	10.0 U	10.0	1.5	05/24/21 15:17	
2-Hexanone	ug/L	10.0 U	10.0	0.58	05/24/21 15:17	
4-Methyl-2-pentanone (MIBK)	ug/L	10.0 U	10.0	0.42	05/24/21 15:17	
Acetone	ug/L	10.0 U	10.0	5.6	05/24/21 15:17	
Benzene	ug/L	1.0 U	1.0	0.34	05/24/21 15:17	
Bromodichloromethane	ug/L	1.0 U	1.0	0.35	05/24/21 15:17	IH
Bromoform	ug/L	1.0 U	1.0	0.56	05/24/21 15:17	
Bromomethane	ug/L	1.0 U	1.0	0.73	05/24/21 15:17	CL
Carbon disulfide	ug/L	1.0 U	1.0	0.32	05/24/21 15:17	
Carbon tetrachloride	ug/L	1.0 U	1.0	0.44	05/24/21 15:17	
Chlorobenzene	ug/L	1.0 U	1.0	0.26	05/24/21 15:17	
Chloroethane	ug/L	1.0 U	1.0	0.64	05/24/21 15:17	IH
Chloroform	ug/L	0.69J	1.0	0.39	05/24/21 15:17	
Chloromethane	ug/L	1.0 U	1.0	0.40	05/24/21 15:17	
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0	0.38	05/24/21 15:17	
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0	0.29	05/24/21 15:17	
Cyclohexane	ug/L	10.0 U	10.0	0.33	05/24/21 15:17	
Dibromochloromethane	ug/L	1.0 U	1.0	0.43	05/24/21 15:17	
Dichlorodifluoromethane	ug/L	1.0 U	1.0	0.63	05/24/21 15:17	IH
Ethylbenzene	ug/L	1.0 U	1.0	0.40	05/24/21 15:17	
Isopropylbenzene (Cumene)	ug/L	1.0 U	1.0	0.47	05/24/21 15:17	IH
m&p-Xylene	ug/L	2.0 U	2.0	0.94	05/24/21 15:17	
Methyl acetate	ug/L	5.0 U	5.0	0.55	05/24/21 15:17	
Methyl-tert-butyl ether	ug/L	1.0 U	1.0	0.25	05/24/21 15:17	

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### QUALITY CONTROL DATA

Project: NE Delineation  
Pace Project No.: 30421666

METHOD BLANK: 2168605 Matrix: Water  
Associated Lab Samples: 30421666001, 30421666002, 30421666003, 30421666004, 30421666006, 30421666007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylene Chloride	ug/L	1.0 U	1.0	0.64	05/24/21 15:17	
o-Xylene	ug/L	1.0 U	1.0	0.41	05/24/21 15:17	
Styrene	ug/L	1.0 U	1.0	0.33	05/24/21 15:17	IH
Tetrachloroethene	ug/L	1.0 U	1.0	0.39	05/24/21 15:17	
Toluene	ug/L	1.0 U	1.0	0.32	05/24/21 15:17	
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0	0.28	05/24/21 15:17	
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0	0.32	05/24/21 15:17	
Trichloroethene	ug/L	1.0 U	1.0	0.29	05/24/21 15:17	
Trichlorofluoromethane	ug/L	1.0 U	1.0	0.51	05/24/21 15:17	
Vinyl chloride	ug/L	1.0 U	1.0	0.29	05/24/21 15:17	
Xylene (Total)	ug/L	3.0 U	3.0	1.4	05/24/21 15:17	
1,2-Dichloroethane-d4 (S)	%	104	70-130		05/24/21 15:17	
4-Bromofluorobenzene (S)	%	102	70-130		05/24/21 15:17	
Dibromofluoromethane (S)	%	107	70-130		05/24/21 15:17	
Toluene-d8 (S)	%	90	70-130		05/24/21 15:17	

LABORATORY CONTROL SAMPLE: 2168606

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.8	104	70-130	IH
1,1,2,2-Tetrachloroethane	ug/L	20	18.1	90	70-130	
1,1,2-Trichloroethane	ug/L	20	18.5	92	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	20	21.5J	107	61-138	
1,1-Dichloroethane	ug/L	20	18.6	93	70-130	
1,1-Dichloroethene	ug/L	20	17.6	88	70-130	
1,2,3-Trichlorobenzene	ug/L	20	17.5	87	70-130	
1,2,4-Trichlorobenzene	ug/L	20	17.3	87	70-130	IH
1,2-Dibromo-3-chloropropane	ug/L	20	16.6	83	59-122	
1,2-Dibromoethane (EDB)	ug/L	20	17.8	89	70-130	
1,2-Dichlorobenzene	ug/L	20	19.5	98	70-130	IH
1,2-Dichloroethane	ug/L	20	17.6	88	70-130	
1,2-Dichloroethene (Total)	ug/L	40	35.3	88	70-130	
1,2-Dichloropropane	ug/L	20	18.3	92	70-130	
1,3-Dichlorobenzene	ug/L	20	20.1	100	70-130	
1,4-Dichlorobenzene	ug/L	20	19.3	97	70-130	
2-Butanone (MEK)	ug/L	20	16.4	82	70-130	
2-Hexanone	ug/L	20	15.1	76	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	20	16.7	84	70-130	
Acetone	ug/L	20	20.6	103	67-173	
Benzene	ug/L	20	19.2	96	70-130	
Bromodichloromethane	ug/L	20	19.6	98	70-130	IH
Bromoform	ug/L	20	17.8	89	63-119	
Bromomethane	ug/L	20	10	50	24-159	CL
Carbon disulfide	ug/L	20	20.3	101	57-132	

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### QUALITY CONTROL DATA

Project: NE Delineation

Pace Project No.: 30421666

LABORATORY CONTROL SAMPLE: 2168606

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	20	19.2	96	70-130	
Chlorobenzene	ug/L	20	19.9	100	70-130	
Chloroethane	ug/L	20	23.0	115	62-145	IH
Chloroform	ug/L	20	19.9	99	70-130	
Chloromethane	ug/L	20	15.7	79	66-140	
cis-1,2-Dichloroethene	ug/L	20	17.5	88	70-130	
cis-1,3-Dichloropropene	ug/L	20	18.7	94	70-130	
Cyclohexane	ug/L	20	17.5	88	63-128	
Dibromochloromethane	ug/L	20	17.9	89	70-130	
Dichlorodifluoromethane	ug/L	20	23.0	115	62-162	IH
Ethylbenzene	ug/L	20	19.7	98	70-130	
Isopropylbenzene (Cumene)	ug/L	20	22.4	112	70-130	IH
m&p-Xylene	ug/L	40	40.8	102	70-130	
Methyl acetate	ug/L	20	17.2	86	37-158	
Methyl-tert-butyl ether	ug/L	20	17.0	85	70-130	
Methylene Chloride	ug/L	20	16.9	84	70-130	
o-Xylene	ug/L	20	19.3	96	70-130	
Styrene	ug/L	20	19.8	99	70-130	IH
Tetrachloroethene	ug/L	20	20.7	103	70-130	
Toluene	ug/L	20	19.2	96	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.8	89	70-130	
trans-1,3-Dichloropropene	ug/L	20	18.5	92	70-130	
Trichloroethene	ug/L	20	18.2	91	70-130	
Trichlorofluoromethane	ug/L	20	24.7	123	70-130	
Vinyl chloride	ug/L	20	18.8	94	70-130	
Xylene (Total)	ug/L	60	60.1	100	70-130	
1,2-Dichloroethane-d4 (S)	%			102	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Dibromofluoromethane (S)	%			101	70-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2168607 2168608

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		30421666003	Spike Conc.	Spike Conc.	Result							
1,1,1-Trichloroethane	ug/L	1.0 U	20	20	19.5	19.1	98	96	55-146	2	30	IH
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	20	20	16.1	15.5	80	78	55-118	3	30	
1,1,2-Trichloroethane	ug/L	1.0 U	20	20	16.9	15.8	85	79	61-122	7	30	
1,1,2-Trichlorotrifluoroethane	ug/L	50.0 U	20	20	17.6J	19.8J	88	99	42-134		30	
1,1-Dichloroethane	ug/L	1.0 U	20	20	16.9	16.5	85	83	59-130	2	30	
1,1-Dichloroethene	ug/L	1.0 U	20	20	17.0	16.7	85	83	52-119	2	30	
1,2,3-Trichlorobenzene	ug/L	2.0 U	20	20	15.2	15.1	76	75	45-126	1	30	
1,2,4-Trichlorobenzene	ug/L	1.0 U	20	20	16.0	15.4	80	77	38-146	4	30	IH
1,2-Dibromo-3-chloropropane	ug/L	5.0 U	20	20	15.3	14.8	77	74	32-112	3	30	

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### QUALITY CONTROL DATA

Project: NE Delineation  
Pace Project No.: 30421666

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2168607												2168608											
Parameter	Units	30421666003		MS	MSD	MS		MSD		% Rec Limits	RPD	Max RPD	Qual										
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec														
1,2-Dibromoethane (EDB)	ug/L	1.0 U	20	20	20	15.9	15.2	80	76	61-116	5	30											
1,2-Dichlorobenzene	ug/L	1.0 U	20	20	20	17.6	16.9	88	85	58-126	4	30	IH										
1,2-Dichloroethane	ug/L	1.0 U	20	20	20	16.3	15.6	82	78	49-135	4	30											
1,2-Dichloroethene (Total)	ug/L	2.0 U	40	40	40	33.2	31.8	83	80	61-119	4	30											
1,2-Dichloropropane	ug/L	1.0 U	20	20	20	16.4	15.9	82	79	67-121	3	30											
1,3-Dichlorobenzene	ug/L	1.0 U	20	20	20	18.1	17.6	91	88	56-130	3	30											
1,4-Dichlorobenzene	ug/L	1.0 U	20	20	20	17.2	16.8	86	84	60-121	2	30											
2-Butanone (MEK)	ug/L	10.0 U	20	20	20	14.9	16.2	68	75	59-138	9	30											
2-Hexanone	ug/L	10.0 U	20	20	20	13.3	14.5	66	73	66-123	9	30											
4-Methyl-2-pentanone (MIBK)	ug/L	10.0 U	20	20	20	13.6	14.5	68	73	70-130	6	30	ML										
Acetone	ug/L	8.8J	20	20	20	25.3	26.5	82	88	57-140	5	30											
Benzene	ug/L	9.0	20	20	20	27.7	26.8	93	89	50-149	3	30											
Bromodichloromethane	ug/L	1.0 U	20	20	20	17.8	17.5	89	88	46-131	1	30	IH										
Bromoform	ug/L	1.0 U	20	20	20	15.9	15.2	80	76	30-119	5	30											
Bromomethane	ug/L	1.0 U	20	20	20	2.3	3.3	12	17	10-163	35	30	CL,R1										
Carbon disulfide	ug/L	1.0 U	20	20	20	17.5	19.0	87	95	41-116	9	30											
Carbon tetrachloride	ug/L	1.0 U	20	20	20	18.9	17.8	94	89	55-119	6	30											
Chlorobenzene	ug/L	1.0 U	20	20	20	18.5	18.1	93	91	66-124	2	30											
Chloroethane	ug/L	1.0 U	20	20	20	23.4	24.2	117	121	45-162	4	30	IH										
Chloroform	ug/L	8.7	20	20	20	25.5	25.2	84	83	56-123	1	30											
Chloromethane	ug/L	1.0 U	20	20	20	14.1	15.3	71	77	49-150	8	30											
cis-1,2-Dichloroethene	ug/L	1.0 U	20	20	20	16.6	15.8	83	79	63-116	5	30											
cis-1,3-Dichloropropene	ug/L	1.0 U	20	20	20	16.6	16.1	83	80	46-119	3	30											
Cyclohexane	ug/L	10.0 U	20	20	20	15.7	16.9	78	84	51-130	7	30											
Dibromochloromethane	ug/L	1.0 U	20	20	20	16.1	15.5	81	78	42-120	4	30											
Dichlorodifluoromethane	ug/L	1.0 U	20	20	20	21.2	23.1	106	116	59-155	9	30	IH										
Ethylbenzene	ug/L	1.0 U	20	20	20	18.8	18.6	93	92	63-135	1	30											
Isopropylbenzene (Cumene)	ug/L	1.0 U	20	20	20	21.3	20.7	105	102	50-167	3	30	IH										
m&p-Xylene	ug/L	2.0 U	40	40	40	39.5	38.1	97	93	63-135	4	30											
Methyl acetate	ug/L	5.0 U	20	20	20	13.6	14.4	68	72	17-145	6	30											
Methyl-tert-butyl ether	ug/L	1.0 U	20	20	20	14.0	15.4	70	77	53-123	9	30											
Methylene Chloride	ug/L	1.2	20	20	20	17.0	16.0	79	74	57-132	6	30											
o-Xylene	ug/L	1.0 U	20	20	20	18.7	17.7	92	87	57-133	6	30											
Styrene	ug/L	1.0 U	20	20	20	18.4	17.4	92	87	58-130	6	30	IH										
Tetrachloroethene	ug/L	1.0 U	20	20	20	18.4	18.0	92	90	61-132	2	30											
Toluene	ug/L	1.5	20	20	20	20.0	19.4	92	90	59-139	3	30											
trans-1,2-Dichloroethene	ug/L	1.0 U	20	20	20	16.7	16.0	83	80	60-124	4	30											
trans-1,3-Dichloropropene	ug/L	1.0 U	20	20	20	16.5	15.6	83	78	48-121	6	30											
Trichloroethene	ug/L	1.0 U	20	20	20	17.8	17.3	89	87	63-128	3	30											
Trichlorofluoromethane	ug/L	1.0 U	20	20	20	21.8	23.3	109	116	70-152	6	30											
Vinyl chloride	ug/L	1.0 U	20	20	20	18.9	19.6	94	98	67-141	3	30											
Xylene (Total)	ug/L	3.0 U	60	60	60	58.3	55.8	95	91	63-135	4	30											
1,2-Dichloroethane-d4 (S)	%							103	101	70-130													
4-Bromofluorobenzene (S)	%							103	102	70-130													

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### QUALITY CONTROL DATA

Project: NE Delineation

Pace Project No.: 30421666

Parameter	Units	2168607		2168608		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		30421666003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Dibromofluoromethane (S)	%.					98	98	70-130			
Toluene-d8 (S)	%.					95	94	70-130			

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### QUALITY CONTROL DATA

Project: NE Delineation  
Pace Project No.: 30421666

QC Batch: 449751      Analysis Method: EPA 8260B  
QC Batch Method: EPA 8260B      Analysis Description: 8260B MSV  
Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30421666005

METHOD BLANK: 2170304      Matrix: Water  
Associated Lab Samples: 30421666005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	1.0 U	1.0	0.38	05/26/21 13:22	IH,M5
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0	0.47	05/26/21 13:22	M5
1,1,2-Trichloroethane	ug/L	1.0 U	1.0	0.33	05/26/21 13:22	M5
1,1,2-Trichlorotrifluoroethane	ug/L	50.0 U	50.0	3.0	05/26/21 13:22	M5
1,1-Dichloroethane	ug/L	1.0 U	1.0	0.24	05/26/21 13:22	M5
1,1-Dichloroethene	ug/L	1.0 U	1.0	0.24	05/26/21 13:22	M5
1,2,3-Trichlorobenzene	ug/L	2.0 U	2.0	0.89	05/26/21 13:22	M5
1,2,4-Trichlorobenzene	ug/L	1.0 U	1.0	0.73	05/26/21 13:22	IH,M5
1,2-Dibromo-3-chloropropane	ug/L	5.0 U	5.0	0.55	05/26/21 13:22	M5
1,2-Dibromoethane (EDB)	ug/L	1.0 U	1.0	0.44	05/26/21 13:22	M5
1,2-Dichlorobenzene	ug/L	1.0 U	1.0	0.38	05/26/21 13:22	IH,M5
1,2-Dichloroethane	ug/L	1.0 U	1.0	0.33	05/26/21 13:22	M5
1,2-Dichloroethene (Total)	ug/L	2.0 U	2.0	0.66	05/26/21 13:22	M5
1,2-Dichloropropane	ug/L	1.0 U	1.0	0.28	05/26/21 13:22	M5
1,3-Dichlorobenzene	ug/L	1.0 U	1.0	0.45	05/26/21 13:22	M5
1,4-Dichlorobenzene	ug/L	1.0 U	1.0	0.48	05/26/21 13:22	M5
2-Butanone (MEK)	ug/L	10.0 U	10.0	1.5	05/26/21 13:22	M5
2-Hexanone	ug/L	10.0 U	10.0	0.58	05/26/21 13:22	M5
4-Methyl-2-pentanone (MIBK)	ug/L	10.0 U	10.0	0.42	05/26/21 13:22	M5
Acetone	ug/L	10.0 U	10.0	5.6	05/26/21 13:22	M5
Benzene	ug/L	1.0 U	1.0	0.34	05/26/21 13:22	M5
Bromodichloromethane	ug/L	1.0 U	1.0	0.35	05/26/21 13:22	IH,M5
Bromoform	ug/L	1.0 U	1.0	0.56	05/26/21 13:22	M5
Bromomethane	ug/L	1.0 U	1.0	0.73	05/26/21 13:22	M5
Carbon disulfide	ug/L	1.0 U	1.0	0.32	05/26/21 13:22	M5
Carbon tetrachloride	ug/L	1.0 U	1.0	0.44	05/26/21 13:22	M5
Chlorobenzene	ug/L	1.0 U	1.0	0.26	05/26/21 13:22	M5
Chloroethane	ug/L	1.0 U	1.0	0.64	05/26/21 13:22	IH,M5
Chloroform	ug/L	0.52J	1.0	0.39	05/26/21 13:22	M5
Chloromethane	ug/L	1.0 U	1.0	0.40	05/26/21 13:22	M5
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0	0.38	05/26/21 13:22	M5
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0	0.29	05/26/21 13:22	M5
Cyclohexane	ug/L	10.0 U	10.0	0.33	05/26/21 13:22	M5
Dibromochloromethane	ug/L	1.0 U	1.0	0.43	05/26/21 13:22	M5
Dichlorodifluoromethane	ug/L	1.0 U	1.0	0.63	05/26/21 13:22	IH,M5
Ethylbenzene	ug/L	1.0 U	1.0	0.40	05/26/21 13:22	M5
Isopropylbenzene (Cumene)	ug/L	1.0 U	1.0	0.47	05/26/21 13:22	IH,M5
m&p-Xylene	ug/L	2.0 U	2.0	0.94	05/26/21 13:22	M5
Methyl acetate	ug/L	5.0 U	5.0	0.55	05/26/21 13:22	M5
Methyl-tert-butyl ether	ug/L	1.0 U	1.0	0.25	05/26/21 13:22	M5

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: NE Delineation  
Pace Project No.: 30421666

METHOD BLANK: 2170304 Matrix: Water  
Associated Lab Samples: 30421666005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylene Chloride	ug/L	1.0 U	1.0	0.64	05/26/21 13:22	M5
o-Xylene	ug/L	1.0 U	1.0	0.41	05/26/21 13:22	M5
Styrene	ug/L	1.0 U	1.0	0.33	05/26/21 13:22	IH,M5
Tetrachloroethene	ug/L	1.0 U	1.0	0.39	05/26/21 13:22	M5
Toluene	ug/L	1.0 U	1.0	0.32	05/26/21 13:22	M5
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0	0.28	05/26/21 13:22	M5
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0	0.32	05/26/21 13:22	M5
Trichloroethene	ug/L	1.0 U	1.0	0.29	05/26/21 13:22	M5
Trichlorofluoromethane	ug/L	1.0 U	1.0	0.51	05/26/21 13:22	M5
Vinyl chloride	ug/L	1.0 U	1.0	0.29	05/26/21 13:22	M5
Xylene (Total)	ug/L	3.0 U	3.0	1.4	05/26/21 13:22	M5
1,2-Dichloroethane-d4 (S)	%	106	70-130		05/26/21 13:22	M5
4-Bromofluorobenzene (S)	%	103	70-130		05/26/21 13:22	M5
Dibromofluoromethane (S)	%	106	70-130		05/26/21 13:22	M5
Toluene-d8 (S)	%	92	70-130		05/26/21 13:22	M5

LABORATORY CONTROL SAMPLE: 2170305

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.7	104	70-130	IH,M5
1,1,2,2-Tetrachloroethane	ug/L	20	18.7	94	70-130	M5
1,1,2-Trichloroethane	ug/L	20	18.9	95	70-130	M5
1,1,2-Trichlorotrifluoroethane	ug/L	20	21.0J	105	61-138	M5
1,1-Dichloroethane	ug/L	20	18.5	93	70-130	M5
1,1-Dichloroethene	ug/L	20	18.0	90	70-130	M5
1,2,3-Trichlorobenzene	ug/L	20	17.4	87	70-130	M5
1,2,4-Trichlorobenzene	ug/L	20	18.2	91	70-130	IH,M5
1,2-Dibromo-3-chloropropane	ug/L	20	17.7	89	59-122	M5
1,2-Dibromoethane (EDB)	ug/L	20	18.0	90	70-130	M5
1,2-Dichlorobenzene	ug/L	20	19.7	99	70-130	IH,M5
1,2-Dichloroethane	ug/L	20	18.6	93	70-130	M5
1,2-Dichloroethene (Total)	ug/L	40	36.6	92	70-130	M5
1,2-Dichloropropane	ug/L	20	18.4	92	70-130	M5
1,3-Dichlorobenzene	ug/L	20	20.4	102	70-130	M5
1,4-Dichlorobenzene	ug/L	20	18.9	94	70-130	M5
2-Butanone (MEK)	ug/L	20	17.1	85	70-130	M5
2-Hexanone	ug/L	20	16.4	82	70-130	M5
4-Methyl-2-pentanone (MIBK)	ug/L	20	17.4	87	70-130	M5
Acetone	ug/L	20	19.7	98	67-173	M5
Benzene	ug/L	20	19.6	98	70-130	M5
Bromodichloromethane	ug/L	20	20.0	100	70-130	IH,M5
Bromoform	ug/L	20	19.3	96	63-119	M5
Bromomethane	ug/L	20	10.7	54	24-159	M5
Carbon disulfide	ug/L	20	19.6	98	57-132	M5

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

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### QUALITY CONTROL DATA

Project: NE Delineation

Pace Project No.: 30421666

LABORATORY CONTROL SAMPLE: 2170305

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	20	19.9	100	70-130	M5
Chlorobenzene	ug/L	20	20.3	101	70-130	M5
Chloroethane	ug/L	20	25.7	129	62-145	IH,M5
Chloroform	ug/L	20	19.3	97	70-130	M5
Chloromethane	ug/L	20	15.3	77	66-140	M5
cis-1,2-Dichloroethene	ug/L	20	18.4	92	70-130	M5
cis-1,3-Dichloropropene	ug/L	20	19.8	99	70-130	M5
Cyclohexane	ug/L	20	17.7	89	63-128	M5
Dibromochloromethane	ug/L	20	18.6	93	70-130	M5
Dichlorodifluoromethane	ug/L	20	22.5	112	62-162	IH,M5
Ethylbenzene	ug/L	20	20.2	101	70-130	M5
Isopropylbenzene (Cumene)	ug/L	20	23.1	115	70-130	IH,M5
m&p-Xylene	ug/L	40	40.7	102	70-130	M5
Methyl acetate	ug/L	20	18.6	93	37-158	M5
Methyl-tert-butyl ether	ug/L	20	17.8	89	70-130	M5
Methylene Chloride	ug/L	20	17.6	88	70-130	M5
o-Xylene	ug/L	20	19.0	95	70-130	M5
Styrene	ug/L	20	19.5	98	70-130	IH,M5
Tetrachloroethene	ug/L	20	20.2	101	70-130	M5
Toluene	ug/L	20	19.1	96	70-130	M5
trans-1,2-Dichloroethene	ug/L	20	18.2	91	70-130	M5
trans-1,3-Dichloropropene	ug/L	20	19.4	97	70-130	M5
Trichloroethene	ug/L	20	19.4	97	70-130	M5
Trichlorofluoromethane	ug/L	20	24.0	120	70-130	M5
Vinyl chloride	ug/L	20	19.4	97	70-130	M5
Xylene (Total)	ug/L	60	59.7	99	70-130	M5
1,2-Dichloroethane-d4 (S)	%			101	70-130	M5
4-Bromofluorobenzene (S)	%			101	70-130	M5
Dibromofluoromethane (S)	%			100	70-130	M5
Toluene-d8 (S)	%			95	70-130	M5

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: NE Delineation

Pace Project No.: 30421666

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### 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.

### BATCH QUALIFIERS

Batch: 449751

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

### ANALYTE QUALIFIERS

CL The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.

IH This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.

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

ML Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NE Delineation  
Pace Project No.: 30421666

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30421666001	Trip Blank	EPA 8260B	449383		
30421666002	CO08C-PZM	EPA 8260B	449383		
30421666003	CO08D-PZM	EPA 8260B	449383		
30421666004	CO08B-PZM	EPA 8260B	449383		
30421666005	CO05C-PZM	EPA 8260B	449751		
30421666006	Duplicate	EPA 8260B	449383		
30421666007	CO05A-PZM	EPA 8260B	449383		

### REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY / Analytical Request Doc

WO#: 30421666

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed



### Section A

Required Client Information:

Company: **EnviroAnalytix Group TPA**  
 Address: **1600 Sparrows Point Blvd**  
 Sparrows Point, MD 21219  
 Email To: **newman@paceanalytical.com**  
 Phone: **410-629-8800**  
 Fax: **410-629-8800**  
 Requested Due Date/TAT: **5 day**

### Section B

Required Project Information:

Report To: **James Estep**  
 Copy To: **Si Kabois**  
 PO Number:  
 Project Name: **NE Decontamination**  
 Project Number: **2010210**

### Section C

Invoice Information:

Attention: **Laura Sargent**  
 Company Name: **EnviroAnalytix Group TPA**  
 Address: **1600 Sparrows Point Blvd, Sparrows Point, MD 21219**  
 Pace Quote Reference:  
 Pace Project Manager: **Samantha Bayura**  
 Pace Profile #:

REGULATORY AGENCY  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER  
 Site Location: \_\_\_\_\_ MID \_\_\_\_\_  
 STATE: \_\_\_\_\_

ITEM #	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOIL/SOLID SL OIL OL WIPE WP AIR AR OTHER OT TISSUE TS	SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	# OF CONTAINERS	PRESERVATIVES	Requested Analysis Filtered (Y/N)	Pace Project No. / Lab I.D.
			COMPOSITE START	COMPOSITE END/GRAB						
1		TOP SOIL	5/19/21	830	WT G		Unpreserved	Analysis Test		
2		CO Ø 8C - PZM	5/19/21	1025	WT G		H <sub>2</sub> SO <sub>4</sub>			
3		CO Ø 8D - PZM	5/19/21	1200	WT G		HCl			
4		CO Ø 8B - PZM	5/19/21	1355	WT G		HNO <sub>3</sub>			
5		CO Ø 5C - PZM	5/19/21	1510	WT G		NaOH			
6		Duplicate			WT G		Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>			
7		CO Ø 5A - PZM			WT G		Methanol			
8							DI Water			
9										
10										
11										
12										

ADDITIONAL COMMENTS: **Shaw**

RELINQUISHED BY / AFFILIATION: **Shaw** DATE: **5/19/21** TIME: **1545**

ACCEPTED BY / AFFILIATION: **KACE** DATE: **5/19/21** TIME: **1544**

DATA PACKAGE REQUIRED? (Y/N): **Y**

DATA VALIDATION REQUIRED? (Y/N): **Y**

TEMP IN °C: **33**

RECEIVED ON: **5/19/21**

CUSTODY SEALED: **Y**

SAMPLES INTACT: **Y**

SAMPLER NAME AND SIGNATURE: **Lisa Perun**

PRINT Name of SAMPLER: **Lisa Perun**

SIGNATURE of SAMPLER: **Lisa Perun**

DATE Signed (MM/DD/YYYY): **5/19/21**

Pittsburgh Lab Sample Condition Upon Receipt



Client Name: TradePoint Atlantic

Project #

# **30421666**

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Tracking #: N/A

Label	<u>mll</u>
LIMS Login	<u>mll</u>

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Thermometer Used 9 Type of Ice: Wet Blue None

Cooler Temperature Observed Temp 3.4 °C Correction Factor: -1 °C Final Temp: 33 °C

Temp should be above freezing to 6°C

Comments:	pH paper Lot#			Date and Initials of person examining contents:		
	Yes	No	N/A			
Chain of Custody Present:	/			<p>pH paper Lot# <u>N/A</u></p> <p>Date and Initials of person examining contents: <u>mll 5/20/2001</u></p>		
Chain of Custody Filled Out:	/					
Chain of Custody Relinquished:	/					
Sampler Name & Signature on COC:	/					
Sample Labels match COC:	/					
-Includes date/time/ID Matrix: <u>WT</u>						
Samples Arrived within Hold Time:	/					
Short Hold Time Analysis (<72hr remaining):	/					
Rush Turn Around Time Requested:	/					
Sufficient Volume:	/					
Correct Containers Used:	/					
-Pace Containers Used:	/					
Containers Intact:	/					
Orthophosphate field filtered			/			
Hex Cr Aqueous sample field filtered			/			
Organic Samples checked for dechlorination:			/			
Filtered volume received for Dissolved tests			/			
All containers have been checked for preservation.			/			
exceptions: <u>VOA</u> coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix						
All containers meet method preservation requirements.	/			Initial when completed <u>mll</u>	Date/time of preservation	
				Lot # of added preservative		
Headspace in VOA Vials (>6mm):		/		17.		
Trip Blank Present:	/			18.		
Trip Blank Custody Seals Present	/					
Rad Samples Screened < 0.5 mrem/hr			/	Initial when completed:	Date:	Survey Meter SN:

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

\*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

June 07, 2021

Mr. Bob Tworkowski  
Tradeport Atlantic  
1600 Sparrow's Point Boulevard  
Sparrows Point, MD 21219

RE: Project: NE Delineation GW-Revised Report  
Pace Project No.: 30421885

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on May 20, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

This project follows the April 5, 2016 revision 3 Quality Assurance Project Plan for Sparrows Point Terminal Site, Sparrows Point, MD prepared for EnviroAnalytics Group and is not for PA DEP compliance reporting.

Revision 1 - This report replaces the May 26, 2021 report. This project was revised on June 7, 2021 to correct VOC flagging. (Greensburg, PA)

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

Sincerely,



Samantha Bayura  
samantha.bayura@pacelabs.com  
(724)850-5622  
Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.  
J.Price, ARM Group Inc.  
Mr. Stewart Kabis, ARM Group Inc.  
Mr. Eric S. Magdar, ARM Group Inc.  
Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: NE Delineation GW-Revised Report  
Pace Project No.: 30421885

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### **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

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## SAMPLE SUMMARY

Project: NE Delineation GW-Revised Report  
Pace Project No.: 30421885

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30421885001	Trip Blank	Water	05/20/21 00:01	05/20/21 22:15
30421885002	CO212A-PZM	Water	05/20/21 08:55	05/20/21 22:15
30421885003	CO05B-PZM	Water	05/20/21 11:40	05/20/21 22:15
30421885004	Field Blank	Water	05/20/21 14:30	05/20/21 22:15
30421885005	CO08A-PZM	Water	05/20/21 13:45	05/20/21 22:15

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: NE Delineation GW-Revised Report

Pace Project No.: 30421885

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30421885001	Trip Blank	EPA 8260B	LEL	55	PASI-PA
30421885002	CO212A-PZM	EPA 8260B	LEL	55	PASI-PA
30421885003	CO05B-PZM	EPA 8260B	LEL	55	PASI-PA
30421885004	Field Blank	EPA 8260B	LEL	55	PASI-PA
30421885005	CO08A-PZM	EPA 8260B	LEL	55	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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## PROJECT NARRATIVE

Project: NE Delineation GW-Revised Report  
Pace Project No.: 30421885

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**Date:** June 07, 2021

**CO05B-PZM (Lab ID: 30421885003)**

- Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

**CO08A-PZM (Lab ID: 30421885005)**

- Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

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## PROJECT NARRATIVE

Project: NE Delineation GW-Revised Report

Pace Project No.: 30421885

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**Method:** EPA 8260B

**Description:** 8260B MSV

**Client:** Tradepoint Atlantic

**Date:** June 07, 2021

### General Information:

5 samples were analyzed for EPA 8260B by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

QC Batch: 449250

IH: This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.

- BLANK (Lab ID: 2167930)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- CO05B-PZM (Lab ID: 30421885003)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- CO08A-PZM (Lab ID: 30421885005)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- CO212A-PZM (Lab ID: 30421885002)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane

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## PROJECT NARRATIVE

Project: NE Delineation GW-Revised Report  
Pace Project No.: 30421885

---

**Method:** EPA 8260B  
**Description:** 8260B MSV  
**Client:** Tradepoint Atlantic  
**Date:** June 07, 2021

QC Batch: 449250

IH: This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.

- Chloroethane
- Dichlorodifluoromethane
- Isopropylbenzene (Cumene)
- Styrene
- Field Blank (Lab ID: 30421885004)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- LCS (Lab ID: 2167931)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- MS (Lab ID: 2167932)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- MSD (Lab ID: 2167933)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene
  - 1,2-Dichlorobenzene
  - Bromodichloromethane
  - Chloroethane
  - Dichlorodifluoromethane
  - Isopropylbenzene (Cumene)
  - Styrene
- Trip Blank (Lab ID: 30421885001)
  - 1,1,1-Trichloroethane
  - 1,2,4-Trichlorobenzene

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## PROJECT NARRATIVE

Project: NE Delineation GW-Revised Report

Pace Project No.: 30421885

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**Method:** EPA 8260B

**Description:** 8260B MSV

**Client:** Tradepoint Atlantic

**Date:** June 07, 2021

QC Batch: 449250

IH: This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.

- 1,2-Dichlorobenzene
- Bromodichloromethane
- Chloroethane
- Dichlorodifluoromethane
- Isopropylbenzene (Cumene)
- Styrene

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 449250

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30421447002

ML: Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.

- MSD (Lab ID: 2167933)
  - 2-Hexanone
  - 4-Methyl-2-pentanone (MIBK)

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: NE Delineation GW-Revised Report

Pace Project No.: 30421885

**Sample: Trip Blank**      **Lab ID: 30421885001**      Collected: 05/20/21 00:01      Received: 05/20/21 22:15      Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Acetone	10.0 U	ug/L	10.0	5.6	1		05/22/21 17:25	67-64-1	
Benzene	1.0 U	ug/L	1.0	0.34	1		05/22/21 17:25	71-43-2	
Bromodichloromethane	1.0 U	ug/L	1.0	0.35	1		05/22/21 17:25	75-27-4	IH
Bromoform	1.0 U	ug/L	1.0	0.56	1		05/22/21 17:25	75-25-2	
Bromomethane	1.0 U	ug/L	1.0	0.73	1		05/22/21 17:25	74-83-9	
2-Butanone (MEK)	10.0 U	ug/L	10.0	1.5	1		05/22/21 17:25	78-93-3	
Carbon disulfide	1.0 U	ug/L	1.0	0.32	1		05/22/21 17:25	75-15-0	
Carbon tetrachloride	1.0 U	ug/L	1.0	0.44	1		05/22/21 17:25	56-23-5	
Chlorobenzene	1.0 U	ug/L	1.0	0.26	1		05/22/21 17:25	108-90-7	
Chloroethane	1.0 U	ug/L	1.0	0.64	1		05/22/21 17:25	75-00-3	IH
Chloroform	1.0 U	ug/L	1.0	0.39	1		05/22/21 17:25	67-66-3	
Chloromethane	1.0 U	ug/L	1.0	0.40	1		05/22/21 17:25	74-87-3	
Cyclohexane	10.0 U	ug/L	10.0	0.33	1		05/22/21 17:25	110-82-7	
1,2-Dibromo-3-chloropropane	5.0 U	ug/L	5.0	0.55	1		05/22/21 17:25	96-12-8	
Dibromochloromethane	1.0 U	ug/L	1.0	0.43	1		05/22/21 17:25	124-48-1	
1,2-Dibromoethane (EDB)	1.0 U	ug/L	1.0	0.44	1		05/22/21 17:25	106-93-4	
1,2-Dichlorobenzene	1.0 U	ug/L	1.0	0.38	1		05/22/21 17:25	95-50-1	IH
1,3-Dichlorobenzene	1.0 U	ug/L	1.0	0.45	1		05/22/21 17:25	541-73-1	
1,4-Dichlorobenzene	1.0 U	ug/L	1.0	0.48	1		05/22/21 17:25	106-46-7	
Dichlorodifluoromethane	1.0 U	ug/L	1.0	0.63	1		05/22/21 17:25	75-71-8	IH
1,1-Dichloroethane	1.0 U	ug/L	1.0	0.24	1		05/22/21 17:25	75-34-3	
1,2-Dichloroethane	1.0 U	ug/L	1.0	0.33	1		05/22/21 17:25	107-06-2	
1,2-Dichloroethene (Total)	2.0 U	ug/L	2.0	0.66	1		05/22/21 17:25	540-59-0	
1,1-Dichloroethene	1.0 U	ug/L	1.0	0.24	1		05/22/21 17:25	75-35-4	
cis-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.38	1		05/22/21 17:25	156-59-2	
trans-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.28	1		05/22/21 17:25	156-60-5	
1,2-Dichloropropane	1.0 U	ug/L	1.0	0.28	1		05/22/21 17:25	78-87-5	
cis-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.29	1		05/22/21 17:25	10061-01-5	
trans-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.32	1		05/22/21 17:25	10061-02-6	
Ethylbenzene	1.0 U	ug/L	1.0	0.40	1		05/22/21 17:25	100-41-4	
2-Hexanone	10.0 U	ug/L	10.0	0.58	1		05/22/21 17:25	591-78-6	
Isopropylbenzene (Cumene)	1.0 U	ug/L	1.0	0.47	1		05/22/21 17:25	98-82-8	IH
Methyl acetate	5.0 U	ug/L	5.0	0.55	1		05/22/21 17:25	79-20-9	
Methylene Chloride	1.0 U	ug/L	1.0	0.64	1		05/22/21 17:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	10.0 U	ug/L	10.0	0.42	1		05/22/21 17:25	108-10-1	
Methyl-tert-butyl ether	1.0 U	ug/L	1.0	0.25	1		05/22/21 17:25	1634-04-4	
Styrene	1.0 U	ug/L	1.0	0.33	1		05/22/21 17:25	100-42-5	IH
1,1,2,2-Tetrachloroethane	1.0 U	ug/L	1.0	0.47	1		05/22/21 17:25	79-34-5	
Tetrachloroethene	1.0 U	ug/L	1.0	0.39	1		05/22/21 17:25	127-18-4	
Toluene	1.0 U	ug/L	1.0	0.32	1		05/22/21 17:25	108-88-3	
1,2,3-Trichlorobenzene	2.0 U	ug/L	2.0	0.89	1		05/22/21 17:25	87-61-6	
1,2,4-Trichlorobenzene	1.0 U	ug/L	1.0	0.73	1		05/22/21 17:25	120-82-1	IH
1,1,1-Trichloroethane	1.0 U	ug/L	1.0	0.38	1		05/22/21 17:25	71-55-6	IH
1,1,2-Trichloroethane	1.0 U	ug/L	1.0	0.33	1		05/22/21 17:25	79-00-5	
Trichloroethene	1.0 U	ug/L	1.0	0.29	1		05/22/21 17:25	79-01-6	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: NE Delineation GW-Revised Report  
Pace Project No.: 30421885

Sample: Trip Blank		Lab ID: 30421885001	Collected: 05/20/21 00:01	Received: 05/20/21 22:15	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>		Analytical Method: EPA 8260B Pace Analytical Services - Greensburg							
Trichlorofluoromethane	1.0 U	ug/L	1.0	0.51	1		05/22/21 17:25	75-69-4	
1,1,2-Trichlorotrifluoroethane	50.0 U	ug/L	50.0	3.0	1		05/22/21 17:25	76-13-1	
Vinyl chloride	1.0 U	ug/L	1.0	0.29	1		05/22/21 17:25	75-01-4	
Xylene (Total)	3.0 U	ug/L	3.0	1.4	1		05/22/21 17:25	1330-20-7	
m&p-Xylene	2.0 U	ug/L	2.0	0.94	1		05/22/21 17:25	179601-23-1	
o-Xylene	1.0 U	ug/L	1.0	0.41	1		05/22/21 17:25	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	104	%	70-130		1		05/22/21 17:25	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		05/22/21 17:25	17060-07-0	
Toluene-d8 (S)	95	%	70-130		1		05/22/21 17:25	2037-26-5	
Dibromofluoromethane (S)	110	%	70-130		1		05/22/21 17:25	1868-53-7	

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## ANALYTICAL RESULTS

Project: NE Delineation GW-Revised Report  
Pace Project No.: 30421885

Sample: CO212A-PZM      Lab ID: 30421885002      Collected: 05/20/21 08:55      Received: 05/20/21 22:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Acetone	10.0 U	ug/L	10.0	5.6	1		05/22/21 21:55	67-64-1	
Benzene	1.0 U	ug/L	1.0	0.34	1		05/22/21 21:55	71-43-2	
Bromodichloromethane	1.0 U	ug/L	1.0	0.35	1		05/22/21 21:55	75-27-4	IH
Bromoform	1.0 U	ug/L	1.0	0.56	1		05/22/21 21:55	75-25-2	
Bromomethane	1.0 U	ug/L	1.0	0.73	1		05/22/21 21:55	74-83-9	
2-Butanone (MEK)	10.0 U	ug/L	10.0	1.5	1		05/22/21 21:55	78-93-3	
Carbon disulfide	1.0 U	ug/L	1.0	0.32	1		05/22/21 21:55	75-15-0	
Carbon tetrachloride	1.0 U	ug/L	1.0	0.44	1		05/22/21 21:55	56-23-5	
Chlorobenzene	1.0 U	ug/L	1.0	0.26	1		05/22/21 21:55	108-90-7	
Chloroethane	1.0 U	ug/L	1.0	0.64	1		05/22/21 21:55	75-00-3	IH
Chloroform	1.0 U	ug/L	1.0	0.39	1		05/22/21 21:55	67-66-3	
Chloromethane	1.0 U	ug/L	1.0	0.40	1		05/22/21 21:55	74-87-3	
Cyclohexane	10.0 U	ug/L	10.0	0.33	1		05/22/21 21:55	110-82-7	
1,2-Dibromo-3-chloropropane	5.0 U	ug/L	5.0	0.55	1		05/22/21 21:55	96-12-8	
Dibromochloromethane	1.0 U	ug/L	1.0	0.43	1		05/22/21 21:55	124-48-1	
1,2-Dibromoethane (EDB)	1.0 U	ug/L	1.0	0.44	1		05/22/21 21:55	106-93-4	
1,2-Dichlorobenzene	1.0 U	ug/L	1.0	0.38	1		05/22/21 21:55	95-50-1	IH
1,3-Dichlorobenzene	1.0 U	ug/L	1.0	0.45	1		05/22/21 21:55	541-73-1	
1,4-Dichlorobenzene	1.0 U	ug/L	1.0	0.48	1		05/22/21 21:55	106-46-7	
Dichlorodifluoromethane	1.0 U	ug/L	1.0	0.63	1		05/22/21 21:55	75-71-8	IH
1,1-Dichloroethane	1.0 U	ug/L	1.0	0.24	1		05/22/21 21:55	75-34-3	
1,2-Dichloroethane	1.0 U	ug/L	1.0	0.33	1		05/22/21 21:55	107-06-2	
1,2-Dichloroethene (Total)	2.0 U	ug/L	2.0	0.66	1		05/22/21 21:55	540-59-0	
1,1-Dichloroethene	1.0 U	ug/L	1.0	0.24	1		05/22/21 21:55	75-35-4	
cis-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.38	1		05/22/21 21:55	156-59-2	
trans-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.28	1		05/22/21 21:55	156-60-5	
1,2-Dichloropropane	1.0 U	ug/L	1.0	0.28	1		05/22/21 21:55	78-87-5	
cis-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.29	1		05/22/21 21:55	10061-01-5	
trans-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.32	1		05/22/21 21:55	10061-02-6	
Ethylbenzene	1.0 U	ug/L	1.0	0.40	1		05/22/21 21:55	100-41-4	
2-Hexanone	10.0 U	ug/L	10.0	0.58	1		05/22/21 21:55	591-78-6	
Isopropylbenzene (Cumene)	1.0 U	ug/L	1.0	0.47	1		05/22/21 21:55	98-82-8	IH
Methyl acetate	5.0 U	ug/L	5.0	0.55	1		05/22/21 21:55	79-20-9	
Methylene Chloride	1.0 U	ug/L	1.0	0.64	1		05/22/21 21:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	10.0 U	ug/L	10.0	0.42	1		05/22/21 21:55	108-10-1	
Methyl-tert-butyl ether	1.0 U	ug/L	1.0	0.25	1		05/22/21 21:55	1634-04-4	
Styrene	1.0 U	ug/L	1.0	0.33	1		05/22/21 21:55	100-42-5	IH
1,1,2,2-Tetrachloroethane	1.0 U	ug/L	1.0	0.47	1		05/22/21 21:55	79-34-5	
Tetrachloroethene	1.0 U	ug/L	1.0	0.39	1		05/22/21 21:55	127-18-4	
Toluene	1.0 U	ug/L	1.0	0.32	1		05/22/21 21:55	108-88-3	
1,2,3-Trichlorobenzene	2.0 U	ug/L	2.0	0.89	1		05/22/21 21:55	87-61-6	
1,2,4-Trichlorobenzene	1.0 U	ug/L	1.0	0.73	1		05/22/21 21:55	120-82-1	IH
1,1,1-Trichloroethane	1.0 U	ug/L	1.0	0.38	1		05/22/21 21:55	71-55-6	IH
1,1,2-Trichloroethane	1.0 U	ug/L	1.0	0.33	1		05/22/21 21:55	79-00-5	
Trichloroethene	1.0 U	ug/L	1.0	0.29	1		05/22/21 21:55	79-01-6	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NE Delineation GW-Revised Report  
Pace Project No.: 30421885

Sample: CO212A-PZM		Lab ID: 30421885002		Collected: 05/20/21 08:55		Received: 05/20/21 22:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>		Analytical Method: EPA 8260B Pace Analytical Services - Greensburg							
Trichlorofluoromethane	1.0 U	ug/L	1.0	0.51	1		05/22/21 21:55	75-69-4	
1,1,2-Trichlorotrifluoroethane	50.0 U	ug/L	50.0	3.0	1		05/22/21 21:55	76-13-1	
Vinyl chloride	1.0 U	ug/L	1.0	0.29	1		05/22/21 21:55	75-01-4	
Xylene (Total)	3.0 U	ug/L	3.0	1.4	1		05/22/21 21:55	1330-20-7	
m&p-Xylene	2.0 U	ug/L	2.0	0.94	1		05/22/21 21:55	179601-23-1	
o-Xylene	1.0 U	ug/L	1.0	0.41	1		05/22/21 21:55	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	104	%	70-130		1		05/22/21 21:55	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		05/22/21 21:55	17060-07-0	
Toluene-d8 (S)	95	%	70-130		1		05/22/21 21:55	2037-26-5	
Dibromofluoromethane (S)	105	%	70-130		1		05/22/21 21:55	1868-53-7	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NE Delineation GW-Revised Report

Pace Project No.: 30421885

Sample: CO05B-PZM      Lab ID: 30421885003      Collected: 05/20/21 11:40      Received: 05/20/21 22:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Acetone	100 U	ug/L	100	56.1	10		05/22/21 23:33	67-64-1	
Benzene	2550	ug/L	10.0	3.4	10		05/22/21 23:33	71-43-2	
Bromodichloromethane	10.0 U	ug/L	10.0	3.5	10		05/22/21 23:33	75-27-4	IH
Bromoform	10.0 U	ug/L	10.0	5.6	10		05/22/21 23:33	75-25-2	
Bromomethane	10.0 U	ug/L	10.0	7.3	10		05/22/21 23:33	74-83-9	
2-Butanone (MEK)	100 U	ug/L	100	15.2	10		05/22/21 23:33	78-93-3	
Carbon disulfide	10.0 U	ug/L	10.0	3.2	10		05/22/21 23:33	75-15-0	
Carbon tetrachloride	10.0 U	ug/L	10.0	4.4	10		05/22/21 23:33	56-23-5	
Chlorobenzene	10.0 U	ug/L	10.0	2.6	10		05/22/21 23:33	108-90-7	
Chloroethane	10.0 U	ug/L	10.0	6.4	10		05/22/21 23:33	75-00-3	IH
Chloroform	10.0 U	ug/L	10.0	3.9	10		05/22/21 23:33	67-66-3	
Chloromethane	10.0 U	ug/L	10.0	4.0	10		05/22/21 23:33	74-87-3	
Cyclohexane	100 U	ug/L	100	3.3	10		05/22/21 23:33	110-82-7	
1,2-Dibromo-3-chloropropane	50.0 U	ug/L	50.0	5.5	10		05/22/21 23:33	96-12-8	
Dibromochloromethane	10.0 U	ug/L	10.0	4.3	10		05/22/21 23:33	124-48-1	
1,2-Dibromoethane (EDB)	10.0 U	ug/L	10.0	4.4	10		05/22/21 23:33	106-93-4	
1,2-Dichlorobenzene	10.0 U	ug/L	10.0	3.8	10		05/22/21 23:33	95-50-1	IH
1,3-Dichlorobenzene	10.0 U	ug/L	10.0	4.5	10		05/22/21 23:33	541-73-1	
1,4-Dichlorobenzene	10.0 U	ug/L	10.0	4.8	10		05/22/21 23:33	106-46-7	
Dichlorodifluoromethane	10.0 U	ug/L	10.0	6.3	10		05/22/21 23:33	75-71-8	IH
1,1-Dichloroethane	10.0 U	ug/L	10.0	2.4	10		05/22/21 23:33	75-34-3	
1,2-Dichloroethane	10.0 U	ug/L	10.0	3.3	10		05/22/21 23:33	107-06-2	
1,2-Dichloroethene (Total)	20.0 U	ug/L	20.0	6.6	10		05/22/21 23:33	540-59-0	
1,1-Dichloroethene	10.0 U	ug/L	10.0	2.4	10		05/22/21 23:33	75-35-4	
cis-1,2-Dichloroethene	10.0 U	ug/L	10.0	3.8	10		05/22/21 23:33	156-59-2	
trans-1,2-Dichloroethene	10.0 U	ug/L	10.0	2.8	10		05/22/21 23:33	156-60-5	
1,2-Dichloropropane	10.0 U	ug/L	10.0	2.8	10		05/22/21 23:33	78-87-5	
cis-1,3-Dichloropropene	10.0 U	ug/L	10.0	2.9	10		05/22/21 23:33	10061-01-5	
trans-1,3-Dichloropropene	10.0 U	ug/L	10.0	3.2	10		05/22/21 23:33	10061-02-6	
Ethylbenzene	163	ug/L	10.0	4.0	10		05/22/21 23:33	100-41-4	
2-Hexanone	100 U	ug/L	100	5.8	10		05/22/21 23:33	591-78-6	
Isopropylbenzene (Cumene)	5.0J	ug/L	10.0	4.7	10		05/22/21 23:33	98-82-8	IH
Methyl acetate	50.0 U	ug/L	50.0	5.5	10		05/22/21 23:33	79-20-9	
Methylene Chloride	10.0 U	ug/L	10.0	6.4	10		05/22/21 23:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	100 U	ug/L	100	4.2	10		05/22/21 23:33	108-10-1	
Methyl-tert-butyl ether	10.0 U	ug/L	10.0	2.5	10		05/22/21 23:33	1634-04-4	
Styrene	5.2J	ug/L	10.0	3.3	10		05/22/21 23:33	100-42-5	IH
1,1,2,2-Tetrachloroethane	10.0 U	ug/L	10.0	4.7	10		05/22/21 23:33	79-34-5	
Tetrachloroethene	10.0 U	ug/L	10.0	3.9	10		05/22/21 23:33	127-18-4	
Toluene	176	ug/L	10.0	3.2	10		05/22/21 23:33	108-88-3	
1,2,3-Trichlorobenzene	20.0 U	ug/L	20.0	8.9	10		05/22/21 23:33	87-61-6	
1,2,4-Trichlorobenzene	10.0 U	ug/L	10.0	7.3	10		05/22/21 23:33	120-82-1	IH
1,1,1-Trichloroethane	10.0 U	ug/L	10.0	3.8	10		05/22/21 23:33	71-55-6	IH
1,1,2-Trichloroethane	10.0 U	ug/L	10.0	3.3	10		05/22/21 23:33	79-00-5	
Trichloroethene	10.0 U	ug/L	10.0	2.9	10		05/22/21 23:33	79-01-6	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NE Delineation GW-Revised Report  
Pace Project No.: 30421885

Sample: CO05B-PZM		Lab ID: 30421885003		Collected: 05/20/21 11:40		Received: 05/20/21 22:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>		Analytical Method: EPA 8260B Pace Analytical Services - Greensburg							
Trichlorofluoromethane	<b>10.0 U</b>	ug/L	10.0	5.1	10		05/22/21 23:33	75-69-4	
1,1,2-Trichlorotrifluoroethane	<b>500 U</b>	ug/L	500	30.5	10		05/22/21 23:33	76-13-1	
Vinyl chloride	<b>10.0 U</b>	ug/L	10.0	2.9	10		05/22/21 23:33	75-01-4	
Xylene (Total)	<b>296</b>	ug/L	30.0	13.5	10		05/22/21 23:33	1330-20-7	
m&p-Xylene	<b>189</b>	ug/L	20.0	9.4	10		05/22/21 23:33	179601-23-1	
o-Xylene	<b>107</b>	ug/L	10.0	4.1	10		05/22/21 23:33	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	108	%	70-130		10		05/22/21 23:33	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		10		05/22/21 23:33	17060-07-0	
Toluene-d8 (S)	96	%	70-130		10		05/22/21 23:33	2037-26-5	
Dibromofluoromethane (S)	101	%	70-130		10		05/22/21 23:33	1868-53-7	

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### ANALYTICAL RESULTS

Project: NE Delineation GW-Revised Report  
Pace Project No.: 30421885

Sample: Field Blank									
Lab ID: 30421885004									
Collected: 05/20/21 14:30									
Received: 05/20/21 22:15									
Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Acetone	10.0 U	ug/L	10.0	5.6	1		05/22/21 18:14	67-64-1	
Benzene	1.0 U	ug/L	1.0	0.34	1		05/22/21 18:14	71-43-2	
Bromodichloromethane	1.0 U	ug/L	1.0	0.35	1		05/22/21 18:14	75-27-4	IH
Bromoform	1.0 U	ug/L	1.0	0.56	1		05/22/21 18:14	75-25-2	
Bromomethane	1.0 U	ug/L	1.0	0.73	1		05/22/21 18:14	74-83-9	
2-Butanone (MEK)	10.0 U	ug/L	10.0	1.5	1		05/22/21 18:14	78-93-3	
Carbon disulfide	1.0 U	ug/L	1.0	0.32	1		05/22/21 18:14	75-15-0	
Carbon tetrachloride	1.0 U	ug/L	1.0	0.44	1		05/22/21 18:14	56-23-5	
Chlorobenzene	1.0 U	ug/L	1.0	0.26	1		05/22/21 18:14	108-90-7	
Chloroethane	1.0 U	ug/L	1.0	0.64	1		05/22/21 18:14	75-00-3	IH
Chloroform	1.0 U	ug/L	1.0	0.39	1		05/22/21 18:14	67-66-3	
Chloromethane	1.0 U	ug/L	1.0	0.40	1		05/22/21 18:14	74-87-3	
Cyclohexane	10.0 U	ug/L	10.0	0.33	1		05/22/21 18:14	110-82-7	
1,2-Dibromo-3-chloropropane	5.0 U	ug/L	5.0	0.55	1		05/22/21 18:14	96-12-8	
Dibromochloromethane	1.0 U	ug/L	1.0	0.43	1		05/22/21 18:14	124-48-1	
1,2-Dibromoethane (EDB)	1.0 U	ug/L	1.0	0.44	1		05/22/21 18:14	106-93-4	
1,2-Dichlorobenzene	1.0 U	ug/L	1.0	0.38	1		05/22/21 18:14	95-50-1	IH
1,3-Dichlorobenzene	1.0 U	ug/L	1.0	0.45	1		05/22/21 18:14	541-73-1	
1,4-Dichlorobenzene	1.0 U	ug/L	1.0	0.48	1		05/22/21 18:14	106-46-7	
Dichlorodifluoromethane	1.0 U	ug/L	1.0	0.63	1		05/22/21 18:14	75-71-8	IH
1,1-Dichloroethane	1.0 U	ug/L	1.0	0.24	1		05/22/21 18:14	75-34-3	
1,2-Dichloroethane	1.0 U	ug/L	1.0	0.33	1		05/22/21 18:14	107-06-2	
1,2-Dichloroethene (Total)	2.0 U	ug/L	2.0	0.66	1		05/22/21 18:14	540-59-0	
1,1-Dichloroethene	1.0 U	ug/L	1.0	0.24	1		05/22/21 18:14	75-35-4	
cis-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.38	1		05/22/21 18:14	156-59-2	
trans-1,2-Dichloroethene	1.0 U	ug/L	1.0	0.28	1		05/22/21 18:14	156-60-5	
1,2-Dichloropropane	1.0 U	ug/L	1.0	0.28	1		05/22/21 18:14	78-87-5	
cis-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.29	1		05/22/21 18:14	10061-01-5	
trans-1,3-Dichloropropene	1.0 U	ug/L	1.0	0.32	1		05/22/21 18:14	10061-02-6	
Ethylbenzene	1.0 U	ug/L	1.0	0.40	1		05/22/21 18:14	100-41-4	
2-Hexanone	10.0 U	ug/L	10.0	0.58	1		05/22/21 18:14	591-78-6	
Isopropylbenzene (Cumene)	1.0 U	ug/L	1.0	0.47	1		05/22/21 18:14	98-82-8	IH
Methyl acetate	5.0 U	ug/L	5.0	0.55	1		05/22/21 18:14	79-20-9	
Methylene Chloride	1.0 U	ug/L	1.0	0.64	1		05/22/21 18:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	10.0 U	ug/L	10.0	0.42	1		05/22/21 18:14	108-10-1	
Methyl-tert-butyl ether	1.0 U	ug/L	1.0	0.25	1		05/22/21 18:14	1634-04-4	
Styrene	1.0 U	ug/L	1.0	0.33	1		05/22/21 18:14	100-42-5	IH
1,1,2,2-Tetrachloroethane	1.0 U	ug/L	1.0	0.47	1		05/22/21 18:14	79-34-5	
Tetrachloroethene	1.0 U	ug/L	1.0	0.39	1		05/22/21 18:14	127-18-4	
Toluene	1.0 U	ug/L	1.0	0.32	1		05/22/21 18:14	108-88-3	
1,2,3-Trichlorobenzene	2.0 U	ug/L	2.0	0.89	1		05/22/21 18:14	87-61-6	
1,2,4-Trichlorobenzene	1.0 U	ug/L	1.0	0.73	1		05/22/21 18:14	120-82-1	IH
1,1,1-Trichloroethane	1.0 U	ug/L	1.0	0.38	1		05/22/21 18:14	71-55-6	IH
1,1,2-Trichloroethane	1.0 U	ug/L	1.0	0.33	1		05/22/21 18:14	79-00-5	
Trichloroethene	1.0 U	ug/L	1.0	0.29	1		05/22/21 18:14	79-01-6	

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## ANALYTICAL RESULTS

Project: NE Delineation GW-Revised Report  
Pace Project No.: 30421885

Sample: Field Blank		Lab ID: 30421885004		Collected: 05/20/21 14:30		Received: 05/20/21 22:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>		Analytical Method: EPA 8260B Pace Analytical Services - Greensburg							
Trichlorofluoromethane	1.0 U	ug/L	1.0	0.51	1		05/22/21 18:14	75-69-4	
1,1,2-Trichlorotrifluoroethane	50.0 U	ug/L	50.0	3.0	1		05/22/21 18:14	76-13-1	
Vinyl chloride	1.0 U	ug/L	1.0	0.29	1		05/22/21 18:14	75-01-4	
Xylene (Total)	3.0 U	ug/L	3.0	1.4	1		05/22/21 18:14	1330-20-7	
m&p-Xylene	2.0 U	ug/L	2.0	0.94	1		05/22/21 18:14	179601-23-1	
o-Xylene	1.0 U	ug/L	1.0	0.41	1		05/22/21 18:14	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	101	%	70-130		1		05/22/21 18:14	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		05/22/21 18:14	17060-07-0	
Toluene-d8 (S)	95	%	70-130		1		05/22/21 18:14	2037-26-5	
Dibromofluoromethane (S)	109	%	70-130		1		05/22/21 18:14	1868-53-7	

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## ANALYTICAL RESULTS

Project: NE Delineation GW-Revised Report

Pace Project No.: 30421885

Sample: CO08A-PZM      Lab ID: 30421885005      Collected: 05/20/21 13:45      Received: 05/20/21 22:15      Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>									
Analytical Method: EPA 8260B									
Pace Analytical Services - Greensburg									
Acetone	100 U	ug/L	100	56.1	10		05/22/21 23:57	67-64-1	
Benzene	452	ug/L	10.0	3.4	10		05/22/21 23:57	71-43-2	
Bromodichloromethane	10.0 U	ug/L	10.0	3.5	10		05/22/21 23:57	75-27-4	IH
Bromoform	10.0 U	ug/L	10.0	5.6	10		05/22/21 23:57	75-25-2	
Bromomethane	10.0 U	ug/L	10.0	7.3	10		05/22/21 23:57	74-83-9	
2-Butanone (MEK)	100 U	ug/L	100	15.2	10		05/22/21 23:57	78-93-3	
Carbon disulfide	10.0 U	ug/L	10.0	3.2	10		05/22/21 23:57	75-15-0	
Carbon tetrachloride	10.0 U	ug/L	10.0	4.4	10		05/22/21 23:57	56-23-5	
Chlorobenzene	10.0 U	ug/L	10.0	2.6	10		05/22/21 23:57	108-90-7	
Chloroethane	10.0 U	ug/L	10.0	6.4	10		05/22/21 23:57	75-00-3	IH
Chloroform	10.0 U	ug/L	10.0	3.9	10		05/22/21 23:57	67-66-3	
Chloromethane	10.0 U	ug/L	10.0	4.0	10		05/22/21 23:57	74-87-3	
Cyclohexane	100 U	ug/L	100	3.3	10		05/22/21 23:57	110-82-7	
1,2-Dibromo-3-chloropropane	50.0 U	ug/L	50.0	5.5	10		05/22/21 23:57	96-12-8	
Dibromochloromethane	10.0 U	ug/L	10.0	4.3	10		05/22/21 23:57	124-48-1	
1,2-Dibromoethane (EDB)	10.0 U	ug/L	10.0	4.4	10		05/22/21 23:57	106-93-4	
1,2-Dichlorobenzene	10.0 U	ug/L	10.0	3.8	10		05/22/21 23:57	95-50-1	IH
1,3-Dichlorobenzene	10.0 U	ug/L	10.0	4.5	10		05/22/21 23:57	541-73-1	
1,4-Dichlorobenzene	10.0 U	ug/L	10.0	4.8	10		05/22/21 23:57	106-46-7	
Dichlorodifluoromethane	10.0 U	ug/L	10.0	6.3	10		05/22/21 23:57	75-71-8	IH
1,1-Dichloroethane	10.0 U	ug/L	10.0	2.4	10		05/22/21 23:57	75-34-3	
1,2-Dichloroethane	10.0 U	ug/L	10.0	3.3	10		05/22/21 23:57	107-06-2	
1,2-Dichloroethene (Total)	20.0 U	ug/L	20.0	6.6	10		05/22/21 23:57	540-59-0	
1,1-Dichloroethene	10.0 U	ug/L	10.0	2.4	10		05/22/21 23:57	75-35-4	
cis-1,2-Dichloroethene	10.0 U	ug/L	10.0	3.8	10		05/22/21 23:57	156-59-2	
trans-1,2-Dichloroethene	10.0 U	ug/L	10.0	2.8	10		05/22/21 23:57	156-60-5	
1,2-Dichloropropane	10.0 U	ug/L	10.0	2.8	10		05/22/21 23:57	78-87-5	
cis-1,3-Dichloropropene	10.0 U	ug/L	10.0	2.9	10		05/22/21 23:57	10061-01-5	
trans-1,3-Dichloropropene	10.0 U	ug/L	10.0	3.2	10		05/22/21 23:57	10061-02-6	
Ethylbenzene	342	ug/L	10.0	4.0	10		05/22/21 23:57	100-41-4	
2-Hexanone	100 U	ug/L	100	5.8	10		05/22/21 23:57	591-78-6	
Isopropylbenzene (Cumene)	22.2	ug/L	10.0	4.7	10		05/22/21 23:57	98-82-8	IH
Methyl acetate	50.0 U	ug/L	50.0	5.5	10		05/22/21 23:57	79-20-9	
Methylene Chloride	10.0 U	ug/L	10.0	6.4	10		05/22/21 23:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	100 U	ug/L	100	4.2	10		05/22/21 23:57	108-10-1	
Methyl-tert-butyl ether	10.0 U	ug/L	10.0	2.5	10		05/22/21 23:57	1634-04-4	
Styrene	159	ug/L	10.0	3.3	10		05/22/21 23:57	100-42-5	IH
1,1,2,2-Tetrachloroethane	10.0 U	ug/L	10.0	4.7	10		05/22/21 23:57	79-34-5	
Tetrachloroethene	10.0 U	ug/L	10.0	3.9	10		05/22/21 23:57	127-18-4	
Toluene	2590	ug/L	10.0	3.2	10		05/22/21 23:57	108-88-3	
1,2,3-Trichlorobenzene	20.0 U	ug/L	20.0	8.9	10		05/22/21 23:57	87-61-6	
1,2,4-Trichlorobenzene	10.0 U	ug/L	10.0	7.3	10		05/22/21 23:57	120-82-1	IH
1,1,1-Trichloroethane	10.0 U	ug/L	10.0	3.8	10		05/22/21 23:57	71-55-6	IH
1,1,2-Trichloroethane	10.0 U	ug/L	10.0	3.3	10		05/22/21 23:57	79-00-5	
Trichloroethene	10.0 U	ug/L	10.0	2.9	10		05/22/21 23:57	79-01-6	

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### ANALYTICAL RESULTS

Project: NE Delineation GW-Revised Report

Pace Project No.: 30421885

Sample: CO08A-PZM		Lab ID: 30421885005		Collected: 05/20/21 13:45		Received: 05/20/21 22:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260B MSV</b>		Analytical Method: EPA 8260B Pace Analytical Services - Greensburg							
Trichlorofluoromethane	<b>10.0 U</b>	ug/L	10.0	5.1	10		05/22/21 23:57	75-69-4	
1,1,2-Trichlorotrifluoroethane	<b>500 U</b>	ug/L	500	30.5	10		05/22/21 23:57	76-13-1	
Vinyl chloride	<b>10.0 U</b>	ug/L	10.0	2.9	10		05/22/21 23:57	75-01-4	
Xylene (Total)	<b>8040</b>	ug/L	30.0	13.5	10		05/22/21 23:57	1330-20-7	
m&p-Xylene	<b>5590</b>	ug/L	20.0	9.4	10		05/22/21 23:57	179601-23-1	
o-Xylene	<b>2450</b>	ug/L	10.0	4.1	10		05/22/21 23:57	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	104	%	70-130		10		05/22/21 23:57	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		10		05/22/21 23:57	17060-07-0	
Toluene-d8 (S)	95	%	70-130		10		05/22/21 23:57	2037-26-5	
Dibromofluoromethane (S)	104	%	70-130		10		05/22/21 23:57	1868-53-7	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: NE Delineation GW-Revised Report  
Pace Project No.: 30421885

QC Batch: 449250 Analysis Method: EPA 8260B  
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV  
Laboratory: Pace Analytical Services - Greensburg  
Associated Lab Samples: 30421885001, 30421885002, 30421885003, 30421885004, 30421885005

METHOD BLANK: 2167930 Matrix: Water  
Associated Lab Samples: 30421885001, 30421885002, 30421885003, 30421885004, 30421885005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	1.0 U	1.0	0.38	05/22/21 16:11	IH
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0	0.47	05/22/21 16:11	
1,1,2-Trichloroethane	ug/L	1.0 U	1.0	0.33	05/22/21 16:11	
1,1,2-Trichlorotrifluoroethane	ug/L	50.0 U	50.0	3.0	05/22/21 16:11	
1,1-Dichloroethane	ug/L	1.0 U	1.0	0.24	05/22/21 16:11	
1,1-Dichloroethene	ug/L	1.0 U	1.0	0.24	05/22/21 16:11	
1,2,3-Trichlorobenzene	ug/L	2.0 U	2.0	0.89	05/22/21 16:11	
1,2,4-Trichlorobenzene	ug/L	1.0 U	1.0	0.73	05/22/21 16:11	IH
1,2-Dibromo-3-chloropropane	ug/L	5.0 U	5.0	0.55	05/22/21 16:11	
1,2-Dibromoethane (EDB)	ug/L	1.0 U	1.0	0.44	05/22/21 16:11	
1,2-Dichlorobenzene	ug/L	1.0 U	1.0	0.38	05/22/21 16:11	IH
1,2-Dichloroethane	ug/L	1.0 U	1.0	0.33	05/22/21 16:11	
1,2-Dichloroethene (Total)	ug/L	2.0 U	2.0	0.66	05/22/21 16:11	
1,2-Dichloropropane	ug/L	1.0 U	1.0	0.28	05/22/21 16:11	
1,3-Dichlorobenzene	ug/L	1.0 U	1.0	0.45	05/22/21 16:11	
1,4-Dichlorobenzene	ug/L	1.0 U	1.0	0.48	05/22/21 16:11	
2-Butanone (MEK)	ug/L	10.0 U	10.0	1.5	05/22/21 16:11	
2-Hexanone	ug/L	10.0 U	10.0	0.58	05/22/21 16:11	
4-Methyl-2-pentanone (MIBK)	ug/L	10.0 U	10.0	0.42	05/22/21 16:11	
Acetone	ug/L	10.0 U	10.0	5.6	05/22/21 16:11	
Benzene	ug/L	1.0 U	1.0	0.34	05/22/21 16:11	
Bromodichloromethane	ug/L	1.0 U	1.0	0.35	05/22/21 16:11	IH
Bromoform	ug/L	1.0 U	1.0	0.56	05/22/21 16:11	
Bromomethane	ug/L	1.0 U	1.0	0.73	05/22/21 16:11	
Carbon disulfide	ug/L	1.0 U	1.0	0.32	05/22/21 16:11	
Carbon tetrachloride	ug/L	1.0 U	1.0	0.44	05/22/21 16:11	
Chlorobenzene	ug/L	1.0 U	1.0	0.26	05/22/21 16:11	
Chloroethane	ug/L	1.0 U	1.0	0.64	05/22/21 16:11	IH
Chloroform	ug/L	1.0 U	1.0	0.39	05/22/21 16:11	
Chloromethane	ug/L	1.0 U	1.0	0.40	05/22/21 16:11	
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0	0.38	05/22/21 16:11	
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0	0.29	05/22/21 16:11	
Cyclohexane	ug/L	10.0 U	10.0	0.33	05/22/21 16:11	
Dibromochloromethane	ug/L	1.0 U	1.0	0.43	05/22/21 16:11	
Dichlorodifluoromethane	ug/L	1.0 U	1.0	0.63	05/22/21 16:11	IH
Ethylbenzene	ug/L	1.0 U	1.0	0.40	05/22/21 16:11	
Isopropylbenzene (Cumene)	ug/L	1.0 U	1.0	0.47	05/22/21 16:11	IH
m&p-Xylene	ug/L	2.0 U	2.0	0.94	05/22/21 16:11	
Methyl acetate	ug/L	5.0 U	5.0	0.55	05/22/21 16:11	
Methyl-tert-butyl ether	ug/L	1.0 U	1.0	0.25	05/22/21 16:11	

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### QUALITY CONTROL DATA

Project: NE Delineation GW-Revised Report  
Pace Project No.: 30421885

METHOD BLANK: 2167930 Matrix: Water  
Associated Lab Samples: 30421885001, 30421885002, 30421885003, 30421885004, 30421885005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Methylene Chloride	ug/L	1.0 U	1.0	0.64	05/22/21 16:11	
o-Xylene	ug/L	1.0 U	1.0	0.41	05/22/21 16:11	
Styrene	ug/L	1.0 U	1.0	0.33	05/22/21 16:11	IH
Tetrachloroethene	ug/L	1.0 U	1.0	0.39	05/22/21 16:11	
Toluene	ug/L	1.0 U	1.0	0.32	05/22/21 16:11	
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0	0.28	05/22/21 16:11	
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0	0.32	05/22/21 16:11	
Trichloroethene	ug/L	1.0 U	1.0	0.29	05/22/21 16:11	
Trichlorofluoromethane	ug/L	1.0 U	1.0	0.51	05/22/21 16:11	
Vinyl chloride	ug/L	1.0 U	1.0	0.29	05/22/21 16:11	
Xylene (Total)	ug/L	3.0 U	3.0	1.4	05/22/21 16:11	
1,2-Dichloroethane-d4 (S)	%	106	70-130		05/22/21 16:11	
4-Bromofluorobenzene (S)	%	103	70-130		05/22/21 16:11	
Dibromofluoromethane (S)	%	108	70-130		05/22/21 16:11	
Toluene-d8 (S)	%	92	70-130		05/22/21 16:11	

LABORATORY CONTROL SAMPLE: 2167931

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.7	103	70-130	IH
1,1,2,2-Tetrachloroethane	ug/L	20	20.7	104	70-130	
1,1,2-Trichloroethane	ug/L	20	19.4	97	70-130	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.5J	103	61-138	
1,1-Dichloroethane	ug/L	20	18.3	91	70-130	
1,1-Dichloroethene	ug/L	20	18.8	94	70-130	
1,2,3-Trichlorobenzene	ug/L	20	17.5	88	70-130	
1,2,4-Trichlorobenzene	ug/L	20	18.1	91	70-130	IH
1,2-Dibromo-3-chloropropane	ug/L	20	20.2	101	59-122	
1,2-Dibromoethane (EDB)	ug/L	20	19.2	96	70-130	
1,2-Dichlorobenzene	ug/L	20	18.9	95	70-130	IH
1,2-Dichloroethane	ug/L	20	18.6	93	70-130	
1,2-Dichloroethene (Total)	ug/L	40	36.1	90	70-130	
1,2-Dichloropropane	ug/L	20	17.6	88	70-130	
1,3-Dichlorobenzene	ug/L	20	19.0	95	70-130	
1,4-Dichlorobenzene	ug/L	20	18.2	91	70-130	
2-Butanone (MEK)	ug/L	20	17.4	87	70-130	
2-Hexanone	ug/L	20	17.3	87	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	20	17.5	87	70-130	
Acetone	ug/L	20	20.8	104	67-173	
Benzene	ug/L	20	19.4	97	70-130	
Bromodichloromethane	ug/L	20	19.6	98	70-130	IH
Bromoform	ug/L	20	21.0	105	63-119	
Bromomethane	ug/L	20	17.4	87	24-159	
Carbon disulfide	ug/L	20	19.7	98	57-132	

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### QUALITY CONTROL DATA

Project: NE Delineation GW-Revised Report  
Pace Project No.: 30421885

LABORATORY CONTROL SAMPLE: 2167931

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	20	19.6	98	70-130	
Chlorobenzene	ug/L	20	18.9	94	70-130	
Chloroethane	ug/L	20	25.1	126	62-145	IH
Chloroform	ug/L	20	18.5	93	70-130	
Chloromethane	ug/L	20	18.1	91	66-140	
cis-1,2-Dichloroethene	ug/L	20	17.9	90	70-130	
cis-1,3-Dichloropropene	ug/L	20	19.4	97	70-130	
Cyclohexane	ug/L	20	15.6	78	63-128	
Dibromochloromethane	ug/L	20	19.0	95	70-130	
Dichlorodifluoromethane	ug/L	20	26.0	130	62-162	IH
Ethylbenzene	ug/L	20	18.2	91	70-130	
Isopropylbenzene (Cumene)	ug/L	20	19.7	99	70-130	IH
m&p-Xylene	ug/L	40	36.5	91	70-130	
Methyl acetate	ug/L	20	19.4	97	37-158	
Methyl-tert-butyl ether	ug/L	20	17.7	88	70-130	
Methylene Chloride	ug/L	20	17.4	87	70-130	
o-Xylene	ug/L	20	17.6	88	70-130	
Styrene	ug/L	20	18.3	92	70-130	IH
Tetrachloroethene	ug/L	20	18.1	91	70-130	
Toluene	ug/L	20	18.6	93	70-130	
trans-1,2-Dichloroethene	ug/L	20	18.2	91	70-130	
trans-1,3-Dichloropropene	ug/L	20	20.4	102	70-130	
Trichloroethene	ug/L	20	19.1	95	70-130	
Trichlorofluoromethane	ug/L	20	25.2	126	70-130	
Vinyl chloride	ug/L	20	21.9	109	70-130	
Xylene (Total)	ug/L	60	54.1	90	70-130	
1,2-Dichloroethane-d4 (S)	%			105	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Dibromofluoromethane (S)	%			104	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2167932 2167933

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		30421447002 Result	Spike Conc.	Spike Conc.	Result							Result
1,1,1-Trichloroethane	ug/L	1.0 U	20	20	17.9	17.7	90	89	55-146	1	30	IH
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	20	20	16.7	15.6	83	78	55-118	7	30	
1,1,2-Trichloroethane	ug/L	1.0 U	20	20	15.7	15.0	78	75	61-122	5	30	
1,1,2-Trichlorotrifluoroethane	ug/L	50.0 U	20	20	17.0J	14.1J	85	70	42-134		30	
1,1-Dichloroethane	ug/L	0.25J	20	20	16.5	15.9	81	78	59-130	4	30	
1,1-Dichloroethene	ug/L	1.0 U	20	20	16.9	16.2	84	81	52-119	4	30	
1,2,3-Trichlorobenzene	ug/L	2.0 U	20	20	13.5	12.6	67	63	45-126	7	30	
1,2,4-Trichlorobenzene	ug/L	1.0 U	20	20	14.1	12.9	71	65	38-146	9	30	IH
1,2-Dibromo-3-chloropropane	ug/L	5.0 U	20	20	15.6	14.6	78	73	32-112	7	30	

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### QUALITY CONTROL DATA

Project: NE Delineation GW-Revised Report  
Pace Project No.: 30421885

Parameter	Units	2167932		2167933		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual	
		30421447002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result									MSD Result
1,2-Dibromoethane (EDB)	ug/L	1.0 U	20	20	14.8	15.0	74	75	61-116	1	30			
1,2-Dichlorobenzene	ug/L	1.0 U	20	20	14.7	13.6	74	68	58-126	7	30	IH		
1,2-Dichloroethane	ug/L	1.0 U	20	20	15.5	15.2	78	76	49-135	2	30			
1,2-Dichloroethene (Total)	ug/L	2.0 U	40	40	31.3	30.9	78	77	61-119	1	30			
1,2-Dichloropropane	ug/L	1.0 U	20	20	15.2	14.5	76	72	67-121	5	30			
1,3-Dichlorobenzene	ug/L	1.0 U	20	20	13.8	13.4	69	67	56-130	3	30			
1,4-Dichlorobenzene	ug/L	1.0 U	20	20	13.7	12.7	69	63	60-121	8	30			
2-Butanone (MEK)	ug/L	10.0 U	20	20	14.8	12.6	74	63	59-138	16	30			
2-Hexanone	ug/L	10.0 U	20	20	14.4	11.8	72	59	66-123	20	30	ML		
4-Methyl-2-pentanone (MIBK)	ug/L	10.0 U	20	20	14.4	12.8	72	64	70-130	12	30	ML		
Acetone	ug/L	10.0 U	20	20	21.1	18.3	89	75	57-140	14	30			
Benzene	ug/L	1.0 U	20	20	16.4	15.6	82	78	50-149	5	30			
Bromodichloromethane	ug/L	1.0 U	20	20	16.0	15.8	80	79	46-131	1	30	IH		
Bromoform	ug/L	1.0 U	20	20	16.8	15.7	84	78	30-119	7	30			
Bromomethane	ug/L	1.0 U	20	20	2.3	3.0	11	15	10-163	27	30			
Carbon disulfide	ug/L	1.6	20	20	18.5	15.3	84	69	41-116	19	30			
Carbon tetrachloride	ug/L	1.0 U	20	20	16.4	15.5	82	78	55-119	5	30			
Chlorobenzene	ug/L	1.0 U	20	20	15.0	14.4	75	72	66-124	4	30			
Chloroethane	ug/L	1.0 U	20	20	28.7	27.0	143	135	45-162	6	30	IH		
Chloroform	ug/L	1.0 U	20	20	15.5	14.9	78	74	56-123	4	30			
Chloromethane	ug/L	1.0 U	20	20	14.6	14.0	73	70	49-150	4	30			
cis-1,2-Dichloroethene	ug/L	1.0 U	20	20	15.3	15.2	76	76	63-116	0	30			
cis-1,3-Dichloropropene	ug/L	1.0 U	20	20	14.4	14.0	72	70	46-119	3	30			
Cyclohexane	ug/L	10.0 U	20	20	12.4	10.8	62	54	51-130	13	30			
Dibromochloromethane	ug/L	1.0 U	20	20	15.2	14.1	76	70	42-120	8	30			
Dichlorodifluoromethane	ug/L	1.0 U	20	20	22.4	22.8	112	114	59-155	2	30	IH		
Ethylbenzene	ug/L	1.0 U	20	20	14.3	13.6	72	68	63-135	5	30			
Isopropylbenzene (Cumene)	ug/L	1.0 U	20	20	15.7	14.7	79	73	50-167	7	30	IH		
m&p-Xylene	ug/L	2.0 U	40	40	28.3	26.9	71	67	63-135	5	30			
Methyl acetate	ug/L	5.0 U	20	20	13.6	11.6	68	58	17-145	16	30			
Methyl-tert-butyl ether	ug/L	1.0 U	20	20	14.8	12.3	74	62	53-123	18	30			
Methylene Chloride	ug/L	1.0 U	20	20	14.4	14.2	72	71	57-132	1	30			
o-Xylene	ug/L	1.0 U	20	20	13.8	13.6	68	66	57-133	1	30			
Styrene	ug/L	1.0 U	20	20	14.3	13.6	70	67	58-130	5	30	IH		
Tetrachloroethene	ug/L	1.0 U	20	20	14.5	13.9	72	70	61-132	4	30			
Toluene	ug/L	1.0	20	20	15.9	15.3	74	71	59-139	4	30			
trans-1,2-Dichloroethene	ug/L	1.0 U	20	20	16.1	15.7	80	79	60-124	2	30			
trans-1,3-Dichloropropene	ug/L	1.0 U	20	20	15.3	14.3	77	72	48-121	7	30			
Trichloroethene	ug/L	15.8	20	20	31.2	30.0	77	71	63-128	4	30			
Trichlorofluoromethane	ug/L	1.0 U	20	20	20.7	21.8	104	109	70-152	5	30			
Vinyl chloride	ug/L	1.0 U	20	20	18.9	19.1	94	96	67-141	1	30			
Xylene (Total)	ug/L	3.0 U	60	60	42.2	40.6	70	67	63-135	4	30			
1,2-Dichloroethane-d4 (S)	%							106	106	70-130				
4-Bromofluorobenzene (S)	%							106	100	70-130				

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### QUALITY CONTROL DATA

Project: NE Delineation GW-Revised Report

Pace Project No.: 30421885

Parameter	Units	2167932		2167933		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		30421447002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Dibromofluoromethane (S)	%.					109	103	70-130			
Toluene-d8 (S)	%.					97	95	70-130			

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## QUALIFIERS

Project: NE Delineation GW-Revised Report

Pace Project No.: 30421885

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### 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.

### SAMPLE QUALIFIERS

Sample: 30421885003

[1] Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

Sample: 30421885005

[1] Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

### ANALYTE QUALIFIERS

IH This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.

ML Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NE Delineation GW-Revised Report

Pace Project No.: 30421885

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30421885001	Trip Blank	EPA 8260B	449250		
30421885002	CO212A-PZM	EPA 8260B	449250		
30421885003	CO05B-PZM	EPA 8260B	449250		
30421885004	Field Blank	EPA 8260B	449250		
30421885005	CO08A-PZM	EPA 8260B	449250		

### REPORT OF LABORATORY ANALYSIS

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Pittsburgh Lab Sample Condition Upon Receipt

30421885



Client Name: Tradepoint Atlantic Project # \_\_\_\_\_

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Label	<u>MLL</u>
LIMS Login	<u>MLL</u>

Tracking #: N/A

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Thermometer Used 9 Type of Ice: Wet Blue None

Cooler Temperature Observed Temp 3.8 °C Correction Factor: -1 °C Final Temp: 3.7 °C

Temp should be above freezing to 6°C

Comments:	pH paper Lot#			Date and Initials of person examining contents:		
	Yes	No	N/A			
Chain of Custody Present:	/			<p><u>N/A</u></p> <p><u>MLL 5/20/2021</u></p>		
Chain of Custody Filled Out:	/					
Chain of Custody Relinquished:	/					
Sampler Name & Signature on COC:	/					
Sample Labels match COC:	/					
-Includes date/time/ID Matrix: <u>W1</u>						
Samples Arrived within Hold Time:	/					
Short Hold Time Analysis (<72hr remaining):	/					
Rush Turn Around Time Requested:	/					
Sufficient Volume:	/					
Correct Containers Used:	/					
-Pace Containers Used:	/					
Containers Intact:	/					
Orthophosphate field filtered			/			
Hex Cr Aqueous sample field filtered			/			
Organic Samples checked for dechlorination:			/			
Filtered volume received for Dissolved tests All containers have been checked for preservation.			/			
exceptions: <u>(VOA)</u> coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix						
All containers meet method preservation requirements.	/			Initial when completed: <u>MLL</u>	Date/time of preservation	
				Lot # of added preservative		
Headspace in VOA Vials (>6mm):		/		17.		
Trip Blank Present:	/			18.		
Trip Blank Custody Seals Present	/					
Rad Samples Screened < 0.5 mrem/hr			/	Initial when completed:	Date:	Survey Meter SN:

Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted By: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

\*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.