

**Twin Disc, Inc.**  
**2018 Annual Monitoring Results**  
**Plant 3 Coolant Release**

Subject Property  
Twin Disc, Inc.  
4600 21st Street  
Racine, WI 53405  
FID #252007140  
BRRTS: 02-52-378657

July 17, 2018

Prepared by:

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State of Wisconsin  
Professional Geologist 932

I, Edwin E. Raymond, hereby certify that I am a hydrogeologist as that term is defined under s. NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Edwin E. Raymond  
Environmental Audits, Inc.  
State of Wisconsin  
Professional Geologist 932

## Preface

Environmental Audits, Inc. (EA) has exercised reasonable efforts to accomplish the required tasks for the "**Twin Disc, Inc. 2018 Annual Monitoring Results Plant 3 Coolant Release**". EA has employed the professional standards applicable to the environmental consulting field today.

The information required for the "**Twin Disc, Inc. 2018 Annual Monitoring Results Plant 3 Coolant Release**" has been provided to Environmental Audits, Inc. by Twin Disc, Inc. management. This work was accomplished within time and budget limitations. More definitive conclusions may be desired than are warranted by the facts available under these constraints. The conclusions stated in this report are intended for guidance.

WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Further, the information provided in this report is not to be construed as legal advice or a recommendation as to a course of action unless explicitly stated.

## **I) Purpose**

The primary purpose of this report is to document the groundwater chemistry for the Coolant Release Area Groundwater Monitoring wells CR-1, CR-2, CR-3, CR-4, and CR-5. Twin Disc, Inc. installed a "French Drain" recovery system during June 2009 to enhance the tramp coolant recovery effort.

The purpose of this submittal is to provide an Annual Report or Update per the requirements of s. NR 724.13(e) describing the results of the previous four (4) quarters of groundwater sampling at the Twin Disc, Inc. Plant 3 manufacturing site as a result of a waste coolant release reported to the WDNR on October 22, 2002, FID #2252007140, BRRTS: 02-52-378657. This report deals with the results obtained over the previous year of quarterly analysis performed on the groundwater monitoring wells, commencing during July 2017. The quarterly groundwater-sampling rounds consisted of sampling the five (5) s. NR 141 Groundwater Monitoring Wells.

Monitoring wells CR-4 and CR-5 were constructed on November 17, 2014 as a response to SERTS Spill ID: 20140630SE52-1 (BRRTS: 02-52-562650), initially reported to the WDNR on June 30, 2014. A separate report detailing the monitoring well installation and initial groundwater chemistry was prepared as a "stand alone" document.

The previously submitted documents are incorporated into this document by reference.

## **INTRODUCTION**

Groundwater monitoring wells CR-1, CR-2, CR-3, CR-4, and CR-5 were developed in accordance to the procedures detailed in s. NR 141. Groundwater monitoring wells were developed in accordance to the procedures detailed in s. NR 141. Groundwater monitoring well samples, obtained for laboratory analysis, were placed in appropriately preserved sample containers immediately after being collected. Groundwater monitoring well samples were cooled to 4 degrees Celsius by placing the samples in a container and surrounding them with ice. Groundwater monitoring well sample containers were filled to the maximum extent possible to reduce headspace and the possible loss of volatile hydrocarbons. All VOC samples were preserved with a 1:1 addition of hydrochloric acid.

Groundwater monitoring well samples were transported, under Chain of Custody, to Pace Analytical Services, Inc., 1241 Bellevue Street - Suite 9, Green Bay, WI 54302, WDNR Certification Number 405132750, and analyzed for Volatile Organic Compounds (VOC), EPA 8260. Please see Appendix III for groundwater monitoring well sample Chain of Custody.

## **Groundwater Analytical Results**

### **Diesel Range Organics - WDNR DRO**

DRO sampling was discontinued as a regular analytical parameter as of the 2<sup>nd</sup> Quarter 2016 groundwater analysis.

### **Petroleum Volatile Organic Compounds (EPA 8260)**

Groundwater analytical results are as follows. Sample results exceeding the appropriate s. NR 140 Enforcement Standard (ES) or Preventative Action Limit (PAL) are highlighted. All Petroleum Volatile Organic Compounds reported are in units of ug/l.

Pace Analytical Services, Inc., 1241 Bellevue Street - Suite 9, Green Bay, WI 54302, WDNR Certification Number 405132750, analyzed these monitoring well samples for Volatile Organic Compounds, utilizing USEPA Method SW8260B/SW5030A. Results of these analyses are as follows:

**Groundwater Well CR-1**

**Sample**

**Description**

	<b>May-18</b>	<b>Mar-18</b>	<b>Oct-17</b>	<b>Jul-17</b>	<b>NR 140 ES</b>	<b>NR 140 PAL</b>
Acetone	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Benzene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Bromodichloromethane	<0.50	<0.50	<0.50	<0.50	0.6 ug/l	0.06 ug/l
Bromoform	<0.50	<0.50	<0.50	<0.50	4.4 ug/l	0.44 ug/l
Bromomethane	<2.4	<2.4	<2.4	<2.4	10 ug/l	1 ug/l
Carbon Disulfide	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Carbon Tetrachloride	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Chlorobenzene	<0.50	<0.50	<0.50	<0.50	NS	NS
Chloroethane	<0.37	<0.37	<0.37	<0.37	400 ug/l	80 ug/l
Chloroform	<2.5	<2.5	<2.5	<2.5	6 ug/l	0.6 ug/l
Chloromethane	<0.50	<0.50	<0.50	<0.50	3 ug/l	0.3 ug/l
Dibromochloromethane	<0.50	<0.50	<0.50	<0.50	60 ug/l	6 ug/l
1,2-Dibromo-3-chloropropane	<2.2	<2.2	<2.2	<2.2	0.2 ug/l	0.02 ug/l
1,2-Dibromomethane	<0.18	<0.18	<0.18	<0.18	NS	NS
1,1-Dichloroethane	<0.24	0.32 j	<0.24	0.31 J	850 ug/l	85 ug/l
1,2-Dichloroethane	<0.17	<0.17	<0.17	<0.17	5 ug/l	0.5 ug/l
1,1-Dichloroethene	<0.41	<0.41	<0.41	<0.41	7 ug/l	0.7 ug/l
cis-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	70 ug/l	7 ug/l
trans-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	100 ug/l	20 ug/l
1,2-Dichloropropane	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Ethyl Benzene	<0.50	<0.50	<0.50	<0.50	700 ug/l	140 ug/l
2-Hexanone	NTF	NTF	NTF	NTF	NS	NS
Methylene Chloride	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Methyl-tert-Butylether	<0.17	<0.17	<0.17	<0.17	60 ug/l	6 ug/l
Styrene	<0.50	<0.50	<0.50	<0.50	100 ug/l	10 ug/l
1,1,2,2-Tetrachloroethane	<0.25	<0.25	<0.25	<0.25	0.2 ug/l	0.02 ug/l
Tetrachloroethene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Toluene	<0.50	<0.50	<0.50	<0.50	1 mg/l	0.2 mg/l
1,1,1-Trichloroethane	<0.50	<0.50	<0.50	<0.50	200 ug/l	40 ug/l
1,1,2-Trichloroethane	<0.16	<0.16	<0.16	<0.16	5 ug/l	0.5 ug/l
Trichloroethene	0.38 J	0.56 J	<0.33	0.42 J	5 ug/l	0.5 ug/l
Vinyl Chloride	<0.18	<0.18	<0.18	<0.18	0.2 ug/l	0.02 ug/l
Total Xylenes	<1.50	<1.50	<1.50	<1.50	10 mg/l	1 mg/l

VOCs reported in units of ug/l

B: Analyte detected in the associated Method Blank

J: Analyte detected below quantitation limits

NTF: Not Tested For

**Groundwater Well CR-2**

<b>Sample Description</b>	<b>May-18</b>	<b>Mar-18</b>	<b>Oct-17</b>	<b>Jul-17</b>	<b>NR 140 ES</b>	<b>NR 140 PAL</b>
Acetone	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Benzene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Bromodichloromethane	<0.50	<0.50	<0.50	<0.50	0.6 ug/l	0.06 ug/l
Bromoform	<0.50	<0.50	<0.50	<0.50	4.4 ug/l	0.44 ug/l
Bromomethane	<2.4	<2.4	<2.4	<2.4	10 ug/l	1 ug/l
Carbon Disulfide	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Carbon Tetrachloride	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Chlorobenzene	<0.50	<0.50	<0.50	<0.50	NS	NS
Chloroethane	<0.37	<0.37	<0.37	<0.37	400 ug/l	80 ug/l
Chloroform	<2.5	<2.5	<2.5	<2.5	6 ug/l	0.6 ug/l
Chloromethane	<0.50	<0.50	<0.50	<0.50	3 ug/l	0.3 ug/l
Dibromochloromethane	<0.50	<0.50	<0.50	<0.50	60 ug/l	6 ug/l
1,2-Dibromo-3-chloropropane	<2.2	<2.2	<2.2	<2.2	0.2 ug/l	0.02 ug/l
1,2-Dibromomethane	<0.16	<0.16	<0.16	<0.16	NS	NS
1,1-Dichloroethane	2.9	3.0	3.2	2.5	850 ug/l	85 ug/l
1,2-Dichloroethane	<0.17	<0.17	<0.17	<0.17	5 ug/l	0.5 ug/l
1,1-Dichloroethene	<0.41	<0.41	<0.41	<0.41	7 ug/l	0.7 ug/l
cis-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	70 ug/l	7 ug/l
trans-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	100 ug/l	20 ug/l
1,2-Dichloropropane	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Ethyl Benzene	<0.50	<0.50	<0.50	<0.50	700 ug/l	140 ug/l
2-Hexanone	NTF	NTF	NTF	NTF	NS	NS
Methylene Chloride	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Methyl-tert-Butylether	<0.17	<0.17	<0.17	<0.17	60 ug/l	6 ug/l
Styrene	<0.50	<0.50	<0.50	<0.50	100 ug/l	10 ug/l
1,1,2,2-Tetrachloroethane	<0.25	<0.25	<0.25	<0.25	0.2 ug/l	0.02 ug/l
Tetrachloroethene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Toluene	<0.50	<0.50	<0.50	<0.50	1 mg/l	0.2 mg/l
1,1,1-Trichloroethane	<0.50	<0.50	<0.50	<0.50	200 ug/l	40 ug/l
1,1,2-Trichloroethane	<0.16	<0.16	<0.16	<0.16	5 ug/l	0.5 ug/l
Trichloroethene	<0.33	<0.33	<0.33	<0.33	5 ug/l	0.5 ug/l
Vinyl Chloride	<0.18	<0.18	<0.18	<0.18	0.2 ug/l	0.02 ug/l
Total Xylenes	<1.50	<1.50	<1.50	<1.50	10 mg/l	1 mg/l

VOCs reported in units of ug/l

B: Analyte detected in the associated Method Blank

J: Analyte detected below quantitation limits

NTF: Not Tested For

**Groundwater Well CR-3**

<b>Sample Description</b>	<b>May-18</b>	<b>Mar-18</b>	<b>Oct-17</b>	<b>Jul-17</b>	<b>NR 140 ES</b>	<b>NR 140 PAL</b>
Acetone	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Benzene	<500	<500	<500	<250	5 ug/l	0.5 ug/l
Bromodichloromethane	<500	<500	<500	<250	0.6 ug/l	0.06 ug/l
Bromoform	<500	<500	<500	<250	4.4 ug/l	0.44 ug/l
Bromomethane	<2430	<2430	<2430	<1220	10 ug/l	1 ug/l
Carbon Disulfide	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Carbon Tetrachloride	<500	<500	<500	<250	5 ug/l	0.5 ug/l
Chlorobenzene	<500	<500	<500	<250	NS	NS
Chloroethane	<b>45400</b>	<b>26000</b>	<b>36000</b>	<b>29500</b>	400 ug/l	80 ug/l
Chloroform	<2500	<2500	<2500	<1250	6 ug/l	0.6 ug/l
Chloromethane	<500	<500	<500	<250	3 ug/l	0.3 ug/l
Dibromochloromethane	<500	<500	<500	<160	60 ug/l	6 ug/l
1,2-Dibromo-3-chloropropane	<2160	<2160	<2160	<1060	0.2 ug/l	0.02 ug/l
1,2-Dibromomethane	<178	<178	<178	<82.2	NS	NS
1,1-Dichloroethane	<b>80400</b>	<b>60800</b>	<b>82800</b>	<b>73000</b>	850 ug/l	85 ug/l
1,2-Dichloroethane	<168	<168	<168	<b>181 J</b>	5 ug/l	0.5 ug/l
1,1-Dichloroethene	<b>2730</b>	<b>2360</b>	<b>2850</b>	<b>2390</b>	7 ug/l	0.7 ug/l
cis-1,2-Dichloroethene	<256	<256	<256	<b>163 J</b>	70 ug/l	7 ug/l
trans-1,2-Dichloroethene	<257	<257	<257	<115	100 ug/l	20 ug/l
1,2-Dichloropropane	<233	<233	<233	<117	5 ug/l	0.5 ug/l
Ethyl Benzene	<500	<500	<500	<250	700 ug/l	140 ug/l
2-Hexanone	NTF	NTF	NTF	NTF	NS	NS
Methylene Chloride	<b>314 J</b>	<233	<233	<b>325 J</b>	5 ug/l	0.5 ug/l
Methyl-tert-Butylether	<174	260 J	<174	<87.1	60 ug/l	6 ug/l
Napthalene	<2500	<2500	<2500	<1250	40 ug/l	8 ug/l
Styrene	<500	<500	<500	<250	100 ug/l	10 ug/l
1,1,2,2-Tetrachloroethane	<249	<249	<249	<125	0.2 ug/l	0.02 ug/l
Tetrachloroethene	<500	<500	<500	<250	5 ug/l	0.5 ug/l
Toluene	<500	<500	<500	<250	1 mg/l	0.2 mg/l
1,1,1-Trichloroethane	<b>13600</b>	<b>18400</b>	<b>21900</b>	<b>15200</b>	200 ug/l	40 ug/l
1,1,2-Trichloroethane	<197	<197	<197	<98.7	5 ug/l	0.5 ug/l
Trichloroethene	<331	<331	<331	<165	5 ug/l	0.5 ug/l
Vinyl Chloride	<b>4030</b>	<b>3810</b>	<b>4390</b>	<b>3530</b>	0.2 ug/l	0.02 ug/l
Total Xylenes	<1500	<1500	<1500	<1500	10 mg/l	1 mg/l

VOCs reported in units of ug/l

- B: Analyte detected in the associated Method Blank
- E: Estimated
- J: Analyte detected below quantitation limits
- NTF: Not Tested For



**Groundwater Well CR-4**

**Sample**

**Description**

	<b>May-18</b>	<b>Mar-18</b>	<b>Oct-17</b>	<b>Jul-17</b>	<b>NR 140 ES</b>	<b>NR 140 PAL</b>
Acetone	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Benzene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Bromodichloromethane	<0.50	<0.50	<0.50	<0.50	0.6 ug/l	0.06 ug/l
Bromoform	<0.50	<0.50	<0.50	<0.50	4.4 ug/l	0.44 ug/l
Bromomethane	<2.4	<2.4	<2.4	<2.4	10 ug/l	1 ug/l
Carbon Disulfide	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Carbon Tetrachloride	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Chlorobenzene	<0.50	<0.50	<0.50	<0.50	NS	NS
Chloroethane	<0.37	<0.37	<0.37	<0.37	400 ug/l	80 ug/l
Chloroform	<2.5	<2.5	<2.5	<2.5	6 ug/l	0.6 ug/l
Chloromethane	<0.50	<0.50	<0.50	<0.50	3 ug/l	0.3 ug/l
Dibromochloromethane	<0.50	<0.50	<0.50	<0.50	60 ug/l	6 ug/l
1,2-Dibromo-3-chloropropane	<2.2	<2.2	<2.2	<2.2	0.2 ug/l	0.02 ug/l
1,2-Dibromomethane	<0.16	<0.16	<0.16	<0.16	NS	NS
1,1-Dichloroethane	0.84 J	0.49 J	<0.24	<0.24	850 ug/l	85 ug/l
1,2-Dichloroethane	<0.17	<0.17	<0.17	<0.17	5 ug/l	0.5 ug/l
1,1-Dichloroethene	<0.41	<0.41	<0.41	<0.41	7 ug/l	0.7 ug/l
cis-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	70 ug/l	7 ug/l
trans-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	100 ug/l	20 ug/l
1,2-Dichloropropane	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Ethyl Benzene	<0.50	<0.50	<0.50	<0.50	700 ug/l	140 ug/l
2-Hexanone	NTF	NTF	NTF	NTF	NS	NS
Methylene Chloride	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Methyl-tert-Butylether	<0.17	<0.17	<0.17	<0.17	60 ug/l	6 ug/l
Napthalene	<2.6	<2.6	<2.6	<2.6	40 ug/l	8 ug/l
Styrene	<0.50	<0.50	<0.50	<0.50	100 ug/l	10 ug/l
1,1,2,2-Tetrachloroethane	<0.25	<0.25	<0.25	<0.25	0.2 ug/l	0.02 ug/l
Tetrachloroethene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Toluene	<0.50	<0.50	<0.50	<0.50	1 mg/l	0.2 mg/l
1,2,4- Trimethylbenzene	<0.50	<0.50	<0.50	<0.50	70 ug/l	7 ug/l
1,1,1-Trichloroethane	<0.50	<0.50	<0.50	<0.50	200 ug/l	40 ug/l
1,1,2-Trichloroethane	<0.16	<0.16	<0.16	<0.16	5 ug/l	0.5 ug/l
Trichloroethene	<0.33	<0.33	<0.33	<0.33	5 ug/l	0.5 ug/l
Vinyl Chloride	<0.18	<0.18	<0.18	<0.18	0.2 ug/l	0.02 ug/l
Total Xylenes	<1.50	<1.50	<1.50	<1.50	10 mg/l	1 mg/l

VOCs reported in units of ug/l

B:

Analyte detected in the associated Method Blank

J:

Analyte detected below quantitation limits

NTF:

Not Tested For

**Groundwater Well CR-5**

**Sample**

**Description**

	<b>Jun-18</b>	<b>Mar-18</b>	<b>Oct-17</b>	<b>Jul-17</b>	<b>NR 140 ES</b>	<b>NR 140 PAL</b>
Acetone	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Benzene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Bromodichloromethane	<0.50	<0.50	<0.50	<0.50	0.6 ug/l	0.06 ug/l
Bromoform	<0.50	<0.50	<0.50	<0.50	4.4 ug/l	0.44 ug/l
Bromomethane	<2.4	<2.4	<2.4	<2.4	10 ug/l	1 ug/l
Carbon Disulfide	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Carbon Tetrachloride	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Chlorobenzene	<0.50	<0.50	<0.50	<0.50	NS	NS
Chloroethane	<0.37	<0.37	<0.37	<0.37	400 ug/l	80 ug/l
Chloroform	<2.5	<2.5	<2.5	<2.5	6 ug/l	0.6 ug/l
Chloromethane	0.62 J	<0.50	<0.50	<0.50	3 ug/l	0.3 ug/l
Dibromochloromethane	<0.50	<0.50	<0.50	<0.50	60 ug/l	6 ug/l
1,2-Dibromo-3-chloropropane	<2.2	<2.2	<2.2	<2.2	0.2 ug/l	0.02 ug/l
1,2-Dibromomethane	<0.16	<0.16	<0.16	<0.16	NS	NS
1,1-Dichloroethane	<0.24	<0.24	<0.24	<0.24	850 ug/l	85 ug/l
1,2-Dichloroethane	<0.17	<0.17	<0.17	<0.17	5 ug/l	0.5 ug/l
1,1-Dichloroethene	<0.41	<0.41	<0.41	<0.41	7 ug/l	0.7 ug/l
cis-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	70 ug/l	7 ug/l
trans-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	100 ug/l	20 ug/l
1,2-Dichloropropane	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Ethyl Benzene	<0.50	<0.50	<0.50	<0.50	700 ug/l	140 ug/l
2-Hexanone	NTF	NTF	NTF	NTF	NS	NS
Methylene Chloride	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Methyl-tert-Butylether	<0.17	<0.17	<0.17	<0.17	60 ug/l	6 ug/l
Styrene	<0.50	<0.50	<0.50	<0.50	100 ug/l	10 ug/l
1,1,2,2-Tetrachloroethane	<0.25	<0.25	<0.25	<0.25	0.2 ug/l	0.02 ug/l
Tetrachloroethene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Toluene	<0.50	<0.50	<0.50	<0.50	1 mg/l	0.2 mg/l
1,1,1-Trichloroethane	<0.50	<0.50	<0.50	<0.50	200 ug/l	40 ug/l
1,1,2-Trichloroethane	<0.16	<0.16	<0.16	<0.16	5 ug/l	0.5 ug/l
Trichloroethene	<0.33	<0.33	<0.33	<0.33	5 ug/l	0.5 ug/l
Vinyl Chloride	<0.18	<0.18	<0.18	<0.18	0.2 ug/l	0.02 ug/l
Total Xylenes	<1.50	<1.50	<1.50	<1.50	10 mg/l	1 mg/l

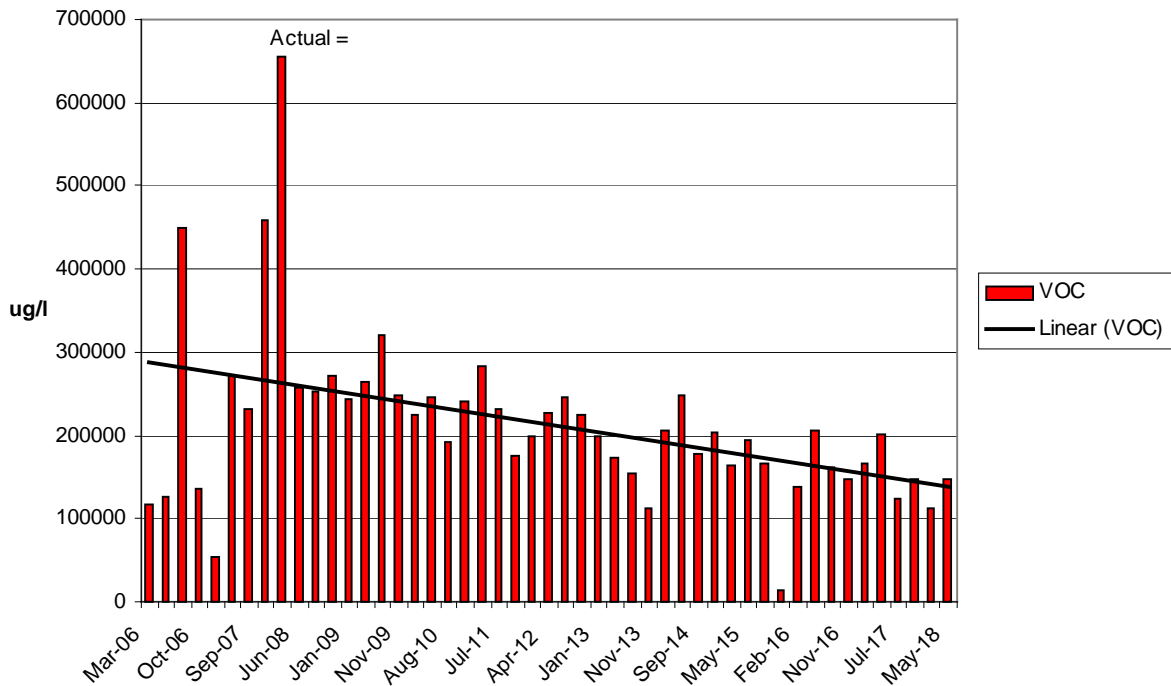
VOCs reported in units of ug/l

B: Analyte detected in the associated Method Blank

J: Analyte detected below quantitation limits

NTF: Not Tested For

### CR-3 VOC Concentration



Environmental Audits, Inc. detected Chloroethane, during their May 15, 2018 sampling event, at CR-3 (45,400 ug/l). Environmental Audits, Inc. detected Chloroethane, during their March 14, 2018 sampling event, at CR-3 (26,000 ug/l). Environmental Audits, Inc. detected Chloroethane, during their October 17, 2017 sampling event, at CR-3 (36,000 ug/l). Environmental Audits, Inc. detected Chloroethane, during their July 20, 2017 sampling event, at CR-3 (29,500 ug/l). The s. NR 140 ES for Chloroethane was exceeded at CR-3 during the Environmental Audits, Inc. July 20, 2017, October 17, 2017, March 14, 2018, and May 15, 2018 sampling event.

Environmental Audits, Inc. detected Chloromethane, during their May 15, 2018 sampling event, at CR-5 (0.62 J ug/l). The PAL is 0.3 ug/l and the ES is 3.0 ug/l for Chloromethane. The PAL was exceeded at CR-5 during the May 15, 2018 sampling event.

Environmental Audits, Inc. detected 1,1-Dichloroethane, during their May 15, 2018 sampling event, at CR-2 (2.9 ug/l), CR-3 (80,400 ug/l). and CR-4 (0.84 J ug/l). Environmental Audits, Inc. detected 1,1-Dichloroethane, during their March 2018 sampling event, at CR-1 (0.32 J ug/l), CR-2 (3.0 ug/l), CR-3 (60,800 ug/l), and CR-4 (0.49 J ug/l). Environmental Audits, Inc. detected 1,1-Dichloroethane, during their October 17, 2017 sampling event, at CR-1 (3.2 ug/l), CR-2 (2.1 ug/l), and CR-3 (82,800 ug/l). Environmental Audits, Inc. detected 1,1-Dichloroethane, during their July 20, 2017 sampling event, at CR-1 (0.31 J ug/l), CR-2 (2.5 ug/l), and CR-3 (73,000 ug/l). The s. NR 140 Enforcement Standard (ES) for 1,1-Dichloroethane is 850 ug/L; the Preventative Action Limit (PAL) is 85 ug/L. The s. NR 140 ES for 1,1-Dichloroethane was exceeded at CR-3 during the Environmental Audits, Inc. July 20, 2017, October 17, 2017, March 14, 2018, and May 15, 2018 sampling event.

Environmental Audits, Inc. detected 1,2-Dichloroethane, during the July 20, 2017 sampling event, at CR-3 (181 J ug/l). The s. NR 140 Enforcement Standard (ES) for 1,2-Dichloroethane is 5 ug/L; the Preventative Action Limit (PAL) is 0.5 ug/L. The s. NR 140 ES for 1,2-Dichloroethane was exceeded at CR-3 during the Environmental Audits, Inc. October 2015 and July 20, 2017 sampling event.

Environmental Audits, Inc. detected 1,1-Dichloroethene, during their May 15, 2018 sampling event, at CR-3 (2,730 ug/l). Environmental Audits, Inc. detected 1,1-Dichloroethene, during their March 14, 2018 sampling event, at CR-3 (2,360 ug/l). Environmental Audits, Inc. detected 1,1-Dichloroethene, during their October 17, 2017 sampling event, at CR-3 (2,850 ug/l). Environmental Audits, Inc. detected 1,1-Dichloroethene, during their July 20, 2017 sampling event, at CR-3 (2,390 ug/l). The s. NR 140 Enforcement Standard (ES) for 1,1-Dichloroethene is 7 ug/L; the Preventative Action Limit (PAL) is 0.7 ug/L. The s. NR 140 ES for 1,1-Dichloroethene was exceeded at CR-3 during the Environmental Audits, Inc. July 20, 2017, October 17, 2017, March 14, 2018, and May 15, 2018 sampling event.

Environmental Audits, Inc. detected cis-1,2-Dichloroethene, during their July 20, 2017 sampling event, at CR-3 (163 J ug/l). The PAL is 7 ug/l and the ES is 70 ug/l for cis-1,2-Dichloroethene. The ES was exceeded at CR-3 during July 20, 2017 sampling event.

Environmental Audits, Inc. detected Methylene Chloride, during their May 15, 2018 sampling event, at CR-3 (314 J ug/l). Environmental Audits, Inc. detected Methylene Chloride, during their March 14, 2018 sampling event, at CR-3 (260 J ug/l). Environmental Audits, Inc. detected Methylene Chloride, during their July 20, 2017

sampling event, at CR-3 (325 J ug/l). The PAL is 0.5 ug/l and the ES is 5 ug/l for Methylene Chloride. The s. NR 140 ES for Methylene Chloride was exceeded at CR-3 during the Environmental Audits, Inc. July 20, 2017, March 14, 2018, and May 15, 2018 sampling event.

Environmental Audits, Inc. detected 1,1,1-Trichloroethane, during their May 15, 2018 sampling event at CR-3 (13,600 ug/l). Environmental Audits, Inc. detected 1,1,1-Trichloroethane, during their March 14, 2018 sampling event at CR-3 (18,400 ug/l). Environmental Audits, Inc. detected 1,1,1-Trichloroethane, during their October 17, 2017 sampling event at CR-3 (21,900 ug/l). Environmental Audits, Inc. detected 1,1,1-Trichloroethane, during their July 20, 2017 sampling event at CR-3 (15,200 ug/l). The s. NR 140 ES for 1,1,1-Trichloroethane is 200 ug/L; the PAL is 40 ug/L. The s. NR 140 ES for 1,1,1-Trichloroethane was exceeded at CR-3 during the Environmental Audits, Inc. July 20, 2017, October 17, 2017, March 14, 2018, and May 15, 2018 sampling event.

Environmental Audits, Inc. detected Trichloroethene, during their May 15, 2018 sampling event, at CR-1 (0.38 J ug/l). Environmental Audits, Inc. detected Trichloroethene, during their March 14, 2018 sampling event, at CR-1 (0.56 J ug/l). Environmental Audits, Inc. detected Trichloroethene, during their July 20, 2017 sampling event, at CR-1 (0.42 J ug/l). The s. NR 140 ES for Trichloroethene is 5 ug/L; the PAL is 0.5 ug/L. The PAL was exceeded at CR-1 during the Environmental Audits March 14, 2018 sampling event.

Environmental Audits, Inc. detected Vinyl Chloride, during their May 15, 2018 sampling event, at CR-3 (4,030 ug/l). Environmental Audits, Inc. detected Vinyl Chloride, during their March 14, 2018 sampling event, at CR-3 (3,810 ug/l). Environmental Audits, Inc. detected Vinyl Chloride, during their October 17, 2017 sampling event, at CR-3 (4,390 ug/l). Environmental Audits, Inc. detected Vinyl Chloride, during their July 20, 2017 sampling event, at CR-3 (3,530 ug/l). The s. NR 140 ES for Vinyl Chloride is 0.2 ug/L; the PAL is 0.02 ug/L. The s. NR 140 ES for Vinyl Chloride was exceeded at CR-3 during the Environmental Audits, Inc. July 20, 2017, October 17, 2017, March 14, 2018, and May 15, 2018 sampling event.

The above mentioned compounds are "daughter" compounds of 1,1,1-Trichloroethane, an indication that biological/chemical remediation may be occurring. More investigative effort is required to confirm this.

Non-halogenated compounds for which an s. NR 140 Public Health Groundwater Quality Standard ES or PAL has been established that have been detected include the following compounds:

Environmental Audits, Inc. detected Naphthalene, during their May 16, 2016 sampling event, at CR-4 (4.4 J ug/l). The PAL is 8 ug/l and the ES is 40 ug/l for Naphthalene.

1,2,4- Trimethylbenzene was detected, during the Environmental Audits May 16, 2016 sampling event, at CR-4 (1.3 ug/l). The PAL is 7 ug/l and the ES is 70 ug/l for 1,2,4- Trimethylbenzene.

DRO sampling was discontinued as a regular analytical parameter as of the 2<sup>nd</sup> Quarter 2016 groundwater analysis.

**Vapor Intrusion:**

A Vapor Intrusion characterization standard was added to the NR716 Site Investigation protocol as 716.05(1) during December 2010. This protocol requires all sites exhibiting VOC/CVOC contamination to conduct a testing program to identify and quantify levels of VOC/CVOC vapors present in the subsurface soils and above surface ambient air. The intent of this new requirement is to prevent exposures that negatively impact human health in terms of excess risk per USEPA and Center for Disease Control (CDC) standards.

As a result of this new legislation, a Vapor Intrusion monitoring program must be implemented in order to obtain Site Closure.

The United States Environmental Protection Agency (USEPA) guidance “OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance)” EPA530-D-02-004, dated November 2002 and the State of Wisconsin Department of Health and Family Services (WI DHFS) Division of Public Health guidance “Chemical Vapor Intrusion and Residential Indoor Air Guidance for Environmental Consultants and Contractors” dated February 13, 2003 were utilized for the evaluation of the Vapor Intrusion Pathway

To that end, Environmental Audits, Inc. placed thirty-two (32) discrete sub-slab sampling ports around and about the Twin Disc, Inc. Plant 3 facility. These sub-slab sampling ports were sampled commencing March 28, 2012 with the latest sub-slab sampling event occurring July 27, 2017.

The OSWER Draft Guidance recommends that an inhabited building generally be considered “near” subsurface contaminants if it is located within approximately 100 ft laterally or vertically of known or interpolated soil gas or groundwater contaminants.<sup>1</sup>

The OSWER Draft Guidance states “Petroleum hydrocarbons biodegrade relatively well in unsaturated soils. Therefore, petroleum-related VOCs generally have to be in “free product” state or groundwater very near, if not in contact with, the building foundation to result in vapor intrusion. In contrast, chlorinated solvents undergo limited biodegradation and can cause a vapor intrusion concern even when the source is a long distance away.”<sup>2</sup>

No residences are located within 100 feet of the building proper and therefore an off-site sub-slab Vapor Intrusion investigation would not appear warranted for this Site.

The sub-slab investigation conducted to date has indicated the presence of Volatile Organic compounds beneath the Twin Disc, Inc. Plant 3 facility. Additional investigative effort is warranted to further identify the effects of seasonality on the detected compounds. Additional sample ports are warranted in the Twin Disc, Inc. Plant 3 Engineering and Human Resource offices to confirm or refute the presence of Volatile Organic Compounds in the theoretical plume beneath these office areas. The complete summary of the Vapor Intrusion findings to date will be included as a standalone document.

### **Conclusions:**

The Site Investigation revealed that the contamination is contained in the soils and groundwater immediately around and about the Tramp Coolant Collection Sump. There is no evidence, from the soil and groundwater investigations conducted to date, that groundwater contamination has migrated off site. No additional groundwater monitoring wells appear to be required to optimize monitoring for a natural attenuation groundwater remedy.

Specific Interim Actions undertaken by Twin Disc, Inc. include the following:

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1 OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance) EPA530-D-02-004, dated November 2002, Page 16

2 OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance) EPA530-D-02-004, dated November 2002, Page 16

s. NR 708.05(l), the measuring for the presence of free product, visually or through field samples or other appropriate methods. Product level readings are being taken in the monitoring wells utilizing a MMC Oil-Water Interface Detector. These readings are being taken periodically and recorded.

s. NR 708.11(2)(c), extracting free product, leachate or groundwater to restrict migration of a contaminate plume. Free product has been removed from CR-3 through the utilization of a mechanical pump commencing during Fall 2013.

A “French Drain” system was installed, during June 2009, in order to enhance the recovery of tramp coolant present in the surficial groundwater. This “French Drain” system is connected to the existing Tramp Coolant Collection Sump enabling collection and off-site treatment.

**Recommendations:**

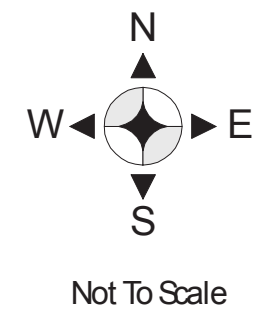
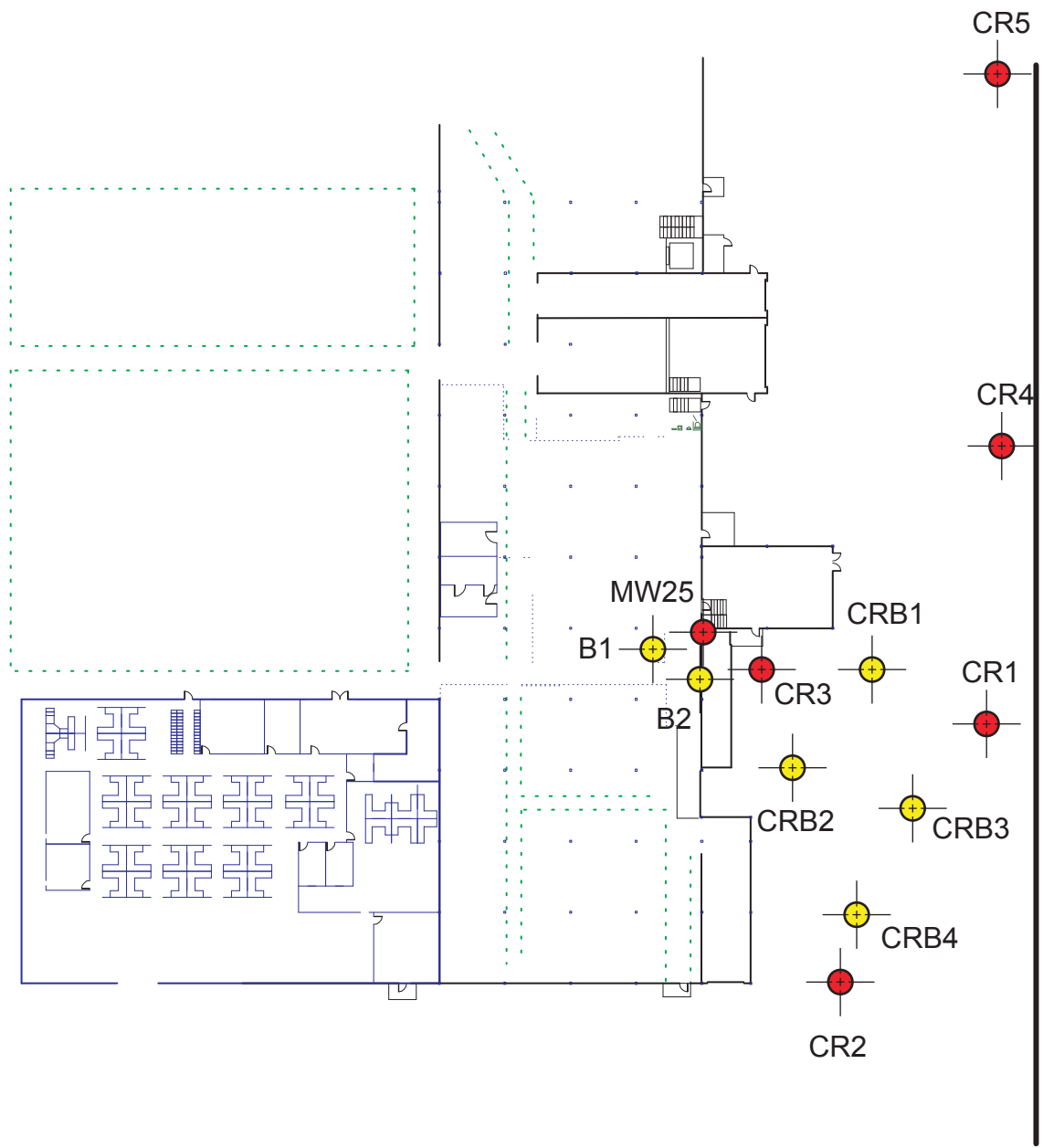
The primary contamination pathway of concern is the surficial groundwater pathway. The Environmental Audits’ groundwater samplings indicate that several s. NR 140 Public Health Enforcement Standards and Preventative Action Limits are exceeded.



It is recommended that the five (5) monitoring wells continue to be sampled quarterly for USEPA Method 8260 Volatile Organic Compounds.

The next groundwater-sampling round will occur during the 3<sup>rd</sup> Quarter 2018.

The objective is to provide effective remediation of the site in both a practical and cost efficient manner.





-  Monitoring Well Locations
-  Geoprobe Locations

Twin Disc, Inc.  
Coolant Release  
Plant 3 - Level 1

Drawn on 05/03/03

**Environmental**  
**Audits**  technical  
management  
group

120 Bishops Way ■ Suite 130 ■ Brookfield, WI ■ 53005  
Phone: 262.785.9322 ■ Fax: 262.785.9323

**Twin Disc, Inc.**  
**4<sup>th</sup> Quarter 2017 Monitoring Results**  
**Plant 3 Coolant Release**

Subject Property  
Twin Disc, Inc.  
4600 21st Street  
Racine, WI 53405  
FID #252007140  
BRRTS: 02-52-378657

October 25, 2017

Prepared by:

Edwin E. Raymond  
Environmental Audits, Inc.  
State of Wisconsin  
Professional Geologist 932

I, Edwin E. Raymond, hereby certify that I am a hydrogeologist as that term is defined under s. NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Edwin E. Raymond  
Environmental Audits, Inc.  
State of Wisconsin  
Professional Geologist 932

## Preface

Environmental Audits, Inc. (EA) has exercised reasonable efforts to accomplish the required tasks for the "**Twin Disc, Inc. 4<sup>th</sup> Quarter 2017 Monitoring Results Plant 3 Coolant Release**". EA has employed the professional standards applicable to the environmental consulting field today.

The information required for the "**Twin Disc, Inc. 4<sup>th</sup> Quarter 2017 Monitoring Results Plant 3 Coolant Release**" has been provided to Environmental Audits, Inc. by Twin Disc, Inc. management. This work was accomplished within time and budget limitations. More definitive conclusions may be desired than are warranted by the facts available under these constraints. The conclusions stated in this report are intended for guidance.

WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Further, the information provided in this report is not to be construed as legal advice or a recommendation as to a course of action unless explicitly stated.

## **I) Purpose**

The primary purpose of this report is to document the groundwater chemistry for the Coolant Release Area Groundwater Monitoring wells CR-1, CR-2, CR-3, CR-4, and CR-5. Twin Disc, Inc. installed a "French Drain" recovery system during June 2009 to enhance the tramp coolant recovery effort.

The purpose of this submittal is to provide an Annual Report or Update per the requirements of s. NR 724.13(e) describing the results of the previous four (4) quarters of groundwater sampling at the Twin Disc, Inc. Plant 3 manufacturing site as a result of a waste coolant release reported to the WDNR on October 22, 2002, FID #2252007140, BRRTS: 02-52-378657. This report deals with the results obtained over the previous year of quarterly analysis performed on the groundwater monitoring wells, commencing during February 2017. The quarterly groundwater-sampling rounds consisted of sampling the five (5) s. NR 141 Groundwater Monitoring Wells.

Monitoring wells CR-4 and CR-5 were constructed on November 17, 2014 as a response to SERTS Spill ID: 20140630SE52-1 (BRRTS: 02-52-562650), initially reported to the WDNR on June 30, 2014. A separate report detailing the monitoring well installation and initial groundwater chemistry was prepared as a "stand alone" document.

The previously submitted documents are incorporated into this document by reference.

## **INTRODUCTION**

Groundwater monitoring wells CR-1, CR-2, CR-3, CR-4, and CR-5 were developed in accordance to the procedures detailed in s. NR 141. Groundwater monitoring wells were developed in accordance to the procedures detailed in s. NR 141. Groundwater monitoring well samples, obtained for laboratory analysis, were placed in appropriately preserved sample containers immediately after being collected. Groundwater monitoring well samples were cooled to 4 degrees Celsius by placing the samples in a container and surrounding them with ice. Groundwater monitoring well sample containers were filled to the maximum extent possible to reduce headspace and the possible loss of volatile hydrocarbons. All VOC samples were preserved with a 1:1 addition of hydrochloric acid.

Groundwater monitoring well samples were transported, under Chain of Custody, to Pace Analytical Services, Inc., 1241 Bellevue Street - Suite 9, Green Bay, WI 54302, WDNR Certification Number 405132750, and analyzed for Volatile Organic Compounds (VOC), EPA 8260. Please see Appendix III for groundwater monitoring well sample Chain of Custody.

## **Groundwater Analytical Results**

### **Diesel Range Organics - WDNR DRO**

DRO sampling was discontinued as a regular analytical parameter as of the 2<sup>nd</sup> Quarter 2016 groundwater analysis.

### **Petroleum Volatile Organic Compounds (EPA 8260)**

Groundwater analytical results are as follows. Sample results exceeding the appropriate s. NR 140 Enforcement Standard (ES) or Preventative Action Limit (PAL) are highlighted. All Petroleum Volatile Organic Compounds reported are in units of ug/l.

Pace Analytical Services, Inc., 1241 Bellevue Street - Suite 9, Green Bay, WI 54302, WDNR Certification Number 405132750, analyzed these monitoring well samples for Volatile Organic Compounds, utilizing USEPA Method SW8260B/SW5030A. Results of these analyses are as follows:

**Groundwater Well CR-1**

**Sample**

**Description**

	<b>Oct-17</b>	<b>Jul-17</b>	<b>Apr-17</b>	<b>Feb-17</b>	<b>NR 140 ES</b>	<b>NR 140 PAL</b>
Acetone	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Benzene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Bromodichloromethane	<0.50	<0.50	<0.50	<0.50	0.6 ug/l	0.06 ug/l
Bromoform	<0.50	<0.50	<0.50	<0.50	4.4 ug/l	0.44 ug/l
Bromomethane	<2.4	<2.4	<2.4	<2.4	10 ug/l	1 ug/l
Carbon Disulfide	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Carbon Tetrachloride	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Chlorobenzene	<0.50	<0.50	<0.50	<0.50	NS	NS
Chloroethane	<0.37	<0.37	<0.37	<0.37	400 ug/l	80 ug/l
Chloroform	<2.5	<2.5	<2.5	<2.5	6 ug/l	0.6 ug/l
Chloromethane	<0.50	<0.50	<0.50	<0.50	3 ug/l	0.3 ug/l
Dibromochloromethane	<0.50	<0.50	<0.50	<0.50	60 ug/l	6 ug/l
1,2-Dibromo-3-chloropropane	<2.2	<2.2	<2.2	<2.2	0.2 ug/l	0.02 ug/l
1,2-Dibromomethane	<0.18	<0.18	<0.18	<0.18	NS	NS
1,1-Dichloroethane	<0.24	0.31 J	0.39 J	<0.24	850 ug/l	85 ug/l
1,2-Dichloroethane	<0.17	<0.17	<0.17	<0.17	5 ug/l	0.5 ug/l
1,1-Dichloroethene	<0.41	<0.41	<0.41	<0.41	7 ug/l	0.7 ug/l
cis-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	70 ug/l	7 ug/l
trans-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	100 ug/l	20 ug/l
1,2-Dichloropropane	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Ethyl Benzene	<0.50	<0.50	<0.50	<0.50	700 ug/l	140 ug/l
2-Hexanone	NTF	NTF	NTF	NTF	NS	NS
Methylene Chloride	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Methyl-tert-Butylether	<0.17	<0.17	<0.17	<0.17	60 ug/l	6 ug/l
Styrene	<0.50	<0.50	<0.50	<0.50	100 ug/l	10 ug/l
1,1,2,2-Tetrachloroethane	<0.25	<0.25	<0.25	<0.25	0.2 ug/l	0.02 ug/l
Tetrachloroethene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Toluene	<0.50	<0.50	<0.50	<0.50	1 mg/l	0.2 mg/l
1,1,1-Trichloroethane	<0.50	<0.50	<0.50	<0.50	200 ug/l	40 ug/l
1,1,2-Trichloroethane	<0.16	<0.16	<0.16	<0.16	5 ug/l	0.5 ug/l
Trichloroethene	<0.33	0.42 J	0.55 J	<0.33	5 ug/l	0.5 ug/l
Vinyl Chloride	<0.18	<0.18	<0.18	<0.18	0.2 ug/l	0.02 ug/l
Total Xylenes	<1.50	<1.50	<1.50	<1.50	10 mg/l	1 mg/l

VOCs reported in units of ug/l

B: Analyte detected in the associated Method Blank

J: Analyte detected below quantitation limits

NTF: Not Tested For

**Groundwater Well CR-2**

<b>Sample Description</b>	<b>Oct-17</b>	<b>Jul-17</b>	<b>Apr-17</b>	<b>Feb-17</b>	<b>NR 140 ES</b>	<b>NR 140 PAL</b>
Acetone	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Benzene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Bromodichloromethane	<0.50	<0.50	<0.50	<0.50	0.6 ug/l	0.06 ug/l
Bromoform	<0.50	<0.50	<0.50	<0.50	4.4 ug/l	0.44 ug/l
Bromomethane	<2.4	<2.4	<2.4	<2.4	10 ug/l	1 ug/l
Carbon Disulfide	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Carbon Tetrachloride	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Chlorobenzene	<0.50	<0.50	<0.50	<0.50	NS	NS
Chloroethane	<0.37	<0.37	<0.37	<0.37	400 ug/l	80 ug/l
Chloroform	<2.5	<2.5	<2.5	<2.5	6 ug/l	0.6 ug/l
Chloromethane	<0.50	<0.50	<0.50	<0.50	3 ug/l	0.3 ug/l
Dibromochloromethane	<0.50	<0.50	<0.50	<0.50	60 ug/l	6 ug/l
1,2-Dibromo-3-chloropropane	<2.2	<2.2	<2.2	<2.2	0.2 ug/l	0.02 ug/l
1,2-Dibromomethane	<0.16	<0.16	<0.16	<0.16	NS	NS
1,1-Dichloroethane	3.2	2.5	2.0	2.1	850 ug/l	85 ug/l
1,2-Dichloroethane	<0.17	<0.17	<0.17	<0.17	5 ug/l	0.5 ug/l
1,1-Dichloroethene	<0.41	<0.41	<0.41	<0.41	7 ug/l	0.7 ug/l
cis-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	70 ug/l	7 ug/l
trans-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	100 ug/l	20 ug/l
1,2-Dichloropropane	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Ethyl Benzene	<0.50	<0.50	<0.50	<0.50	700 ug/l	140 ug/l
2-Hexanone	NTF	NTF	NTF	NTF	NS	NS
Methylene Chloride	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Methyl-tert-Butylether	<0.17	<0.17	<0.17	<0.17	60 ug/l	6 ug/l
Styrene	<0.50	<0.50	<0.50	<0.50	100 ug/l	10 ug/l
1,1,2,2-Tetrachloroethane	<0.25	<0.25	<0.25	<0.25	0.2 ug/l	0.02 ug/l
Tetrachloroethene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Toluene	<0.50	<0.50	<0.50	<0.50	1 mg/l	0.2 mg/l
1,1,1-Trichloroethane	<0.50	<0.50	<0.50	<0.50	200 ug/l	40 ug/l
1,1,2-Trichloroethane	<0.16	<0.16	<0.16	<0.16	5 ug/l	0.5 ug/l
Trichloroethene	<0.33	<0.33	<0.33	<0.33	5 ug/l	0.5 ug/l
Vinyl Chloride	<0.18	<0.18	<0.18	<0.18	0.2 ug/l	0.02 ug/l
Total Xylenes	<1.50	<1.50	<1.50	<1.50	10 mg/l	1 mg/l

VOCs reported in units of ug/l

B: Analyte detected in the associated Method Blank

J: Analyte detected below quantitation limits

NTF: Not Tested For



**Groundwater Well CR-3**

<b>Sample Description</b>	<b>Oct-17</b>	<b>Jul-17</b>	<b>Apr-17</b>	<b>Feb-17</b>	<b>NR 140 ES</b>	<b>NR 140 PAL</b>
Acetone	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Benzene	<500	<250	<500	<500	5 ug/l	0.5 ug/l
Bromodichloromethane	<500	<250	<500	<500	0.6 ug/l	0.06 ug/l
Bromoform	<500	<250	<500	<500	4.4 ug/l	0.44 ug/l
Bromomethane	<2430	<1220	<2430	<2430	10 ug/l	1 ug/l
Carbon Disulfide	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Carbon Tetrachloride	<500	<250	<500	<500	5 ug/l	0.5 ug/l
Chlorobenzene	<500	<250	<500	<500	NS	NS
Chloroethane	<b>36000</b>	<b>29500</b>	<b>36700</b>	<b>28500</b>	400 ug/l	80 ug/l
Chloroform	<2500	<1250	<2500	<2500	6 ug/l	0.6 ug/l
Chloromethane	<500	<250	<500	<500	3 ug/l	0.3 ug/l
Dibromochloromethane	<500	<160	<500	<500	60 ug/l	6 ug/l
1,2-Dibromo-3-chloropropane	<2160	<1060	<2160	<2160	0.2 ug/l	0.02 ug/l
1,2-Dibromomethane	<178	<82.2	<178	<178	NS	NS
1,1-Dichloroethane	<b>82800</b>	<b>73000</b>	<b>115000</b>	<b>98900</b>	850 ug/l	85 ug/l
1,2-Dichloroethane	<168	<b>181 J</b>	<168	<168	5 ug/l	0.5 ug/l
1,1-Dichloroethene	<b>2850</b>	<b>2390</b>	<b>5520</b>	<b>4150</b>	7 ug/l	0.7 ug/l
cis-1,2-Dichloroethene	<256	<b>163 J</b>	<256	<256	70 ug/l	7 ug/l
trans-1,2-Dichloroethene	<257	<115	<257	<257	100 ug/l	20 ug/l
1,2-Dichloropropane	<233	<117	<233	<233	5 ug/l	0.5 ug/l
Ethyl Benzene	<500	<250	<500	<500	700 ug/l	140 ug/l
2-Hexanone	NTF	NTF	NTF	NTF	NS	NS
Methylene Chloride	<233	<b>325 J</b>	<233	<233	5 ug/l	0.5 ug/l
Methyl-tert-Butylether	<174	<87.1	<174	<174	60 ug/l	6 ug/l
Napthalene	<2500	<1250	<2500	<2500	40 ug/l	8 ug/l
Styrene	<500	<250	<500	<500	100 ug/l	10 ug/l
1,1,2,2-Tetrachloroethane	<249	<125	<249	<249	0.2 ug/l	0.02 ug/l
Tetrachloroethene	<500	<250	<500	<500	5 ug/l	0.5 ug/l
Toluene	<500	<250	<500	<500	1 mg/l	0.2 mg/l
1,1,1-Trichloroethane	<b>21900</b>	<b>15200</b>	<b>38400</b>	<b>31300</b>	200 ug/l	40 ug/l
1,1,2-Trichloroethane	<197	<98.7	<197	<197	5 ug/l	0.5 ug/l
Trichloroethene	<331	<165	<331	<331	5 ug/l	0.5 ug/l
Vinyl Chloride	<b>4390</b>	<b>3530</b>	<b>5780</b>	<b>3770</b>	0.2 ug/l	0.02 ug/l
Total Xylenes	<1500	<1500	<1500	<1500	10 mg/l	1 mg/l

VOCs reported in units of ug/l

- B: Analyte detected in the associated Method Blank
- E: Estimated
- J: Analyte detected below quantitation limits
- NTF: Not Tested For

**Groundwater Well CR-4**

<b>Sample Description</b>	<b>Oct-17</b>	<b>Jul-17</b>	<b>Apr-17</b>	<b>Feb-17</b>	<b>NR 140 ES</b>	<b>NR 140 PAL</b>
Acetone	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Benzene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Bromodichloromethane	<0.50	<0.50	<0.50	<0.50	0.6 ug/l	0.06 ug/l
Bromoform	<0.50	<0.50	<0.50	<0.50	4.4 ug/l	0.44 ug/l
Bromomethane	<2.4	<2.4	<2.4	<2.4	10 ug/l	1 ug/l
Carbon Disulfide	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Carbon Tetrachloride	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Chlorobenzene	<0.50	<0.50	<0.50	<0.50	NS	NS
Chloroethane	<0.37	<0.37	<0.37	<0.37	400 ug/l	80 ug/l
Chloroform	<2.5	<2.5	<2.5	<2.5	6 ug/l	0.6 ug/l
Chloromethane	<0.50	<0.50	<0.50	<0.50	3 ug/l	0.3 ug/l
Dibromochloromethane	<0.50	<0.50	<0.50	<0.50	60 ug/l	6 ug/l
1,2-Dibromo-3-chloropropane	<2.2	<2.2	<2.2	<2.2	0.2 ug/l	0.02 ug/l
1,2-Dibromomethane	<0.16	<0.16	<0.16	<0.16	NS	NS
1,1-Dichloroethane	<0.24	<0.24	<0.24	<0.24	850 ug/l	85 ug/l
1,2-Dichloroethane	<0.17	<0.17	<0.17	<0.17	5 ug/l	0.5 ug/l
1,1-Dichloroethene	<0.41	<0.41	<0.41	<0.41	7 ug/l	0.7 ug/l
cis-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	70 ug/l	7 ug/l
trans-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	100 ug/l	20 ug/l
1,2-Dichloropropane	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Ethyl Benzene	<0.50	<0.50	<0.50	<0.50	700 ug/l	140 ug/l
2-Hexanone	NTF	NTF	NTF	NTF	NS	NS
Methylene Chloride	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Methyl-tert-Butylether	<0.17	<0.17	<0.17	<0.17	60 ug/l	6 ug/l
Napthalene	<2.6	<2.6	<2.6	<2.6	40 ug/l	8 ug/l
Styrene	<0.50	<0.50	<0.50	<0.50	100 ug/l	10 ug/l
1,1,2,2-Tetrachloroethane	<0.25	<0.25	<0.25	<0.25	0.2 ug/l	0.02 ug/l
Tetrachloroethene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Toluene	<0.50	<0.50	<0.50	<0.50	1 mg/l	0.2 mg/l
1,2,4- Trimethylbenzene	<0.50	<0.50	<0.50	<0.50	70 ug/l	7 ug/l
1,1,1-Trichloroethane	<0.50	<0.50	<0.50	<0.50	200 ug/l	40 ug/l
1,1,2-Trichloroethane	<0.16	<0.16	<0.16	<0.16	5 ug/l	0.5 ug/l
Trichloroethene	<0.33	<0.33	<0.33	<0.33	5 ug/l	0.5 ug/l
Vinyl Chloride	<0.18	<0.18	<0.18	<0.18	0.2 ug/l	0.02 ug/l
Total Xylenes	<1.50	<1.50	<1.50	<1.50	10 mg/l	1 mg/l

VOCs reported in units of ug/l

B: Analyte detected in the associated Method Blank

J: Analyte detected below quantitation limits

NTF: Not Tested For

**Groundwater Well CR-5**

**Sample**

**Description**

	<b>Oct-17</b>	<b>Jul-17</b>	<b>Apr-17</b>	<b>Feb-17</b>	<b>NR 140 ES</b>	<b>NR 140 PAL</b>
Acetone	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Benzene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Bromodichloromethane	<0.50	<0.50	<0.50	<0.50	0.6 ug/l	0.06 ug/l
Bromoform	<0.50	<0.50	<0.50	<0.50	4.4 ug/l	0.44 ug/l
Bromomethane	<2.4	<2.4	<2.4	<2.4	10 ug/l	1 ug/l
Carbon Disulfide	NTF	NTF	NTF	NTF	1000 ug/l	200 ug/l
Carbon Tetrachloride	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Chlorobenzene	<0.50	<0.50	<0.50	<0.50	NS	NS
Chloroethane	<0.37	<0.37	<0.37	<0.37	400 ug/l	80 ug/l
Chloroform	<2.5	<2.5	<2.5	<2.5	6 ug/l	0.6 ug/l
Chloromethane	<0.50	<0.50	<0.50	<0.50	3 ug/l	0.3 ug/l
Dibromochloromethane	<0.50	<0.50	<0.50	<0.50	60 ug/l	6 ug/l
1,2-Dibromo-3-chloropropane	<2.2	<2.2	<2.2	<2.2	0.2 ug/l	0.02 ug/l
1,2-Dibromomethane	<0.16	<0.16	<0.16	<0.16	NS	NS
1,1-Dichloroethane	<0.24	<0.24	<0.24	<0.24	850 ug/l	85 ug/l
1,2-Dichloroethane	<0.17	<0.17	<0.17	<0.17	5 ug/l	0.5 ug/l
1,1-Dichloroethene	<0.41	<0.41	<0.41	<0.41	7 ug/l	0.7 ug/l
cis-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	70 ug/l	7 ug/l
trans-1,2-Dichloroethene	<0.26	<0.26	<0.26	<0.26	100 ug/l	20 ug/l
1,2-Dichloropropane	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Ethyl Benzene	<0.50	<0.50	<0.50	<0.50	700 ug/l	140 ug/l
2-Hexanone	NTF	NTF	NTF	NTF	NS	NS
Methylene Chloride	<0.23	<0.23	<0.23	<0.23	5 ug/l	0.5 ug/l
Methyl-tert-Butylether	<0.17	<0.17	<0.17	<0.17	60 ug/l	6 ug/l
Styrene	<0.50	<0.50	<0.50	<0.50	100 ug/l	10 ug/l
1,1,2,2-Tetrachloroethane	<0.25	<0.25	<0.25	<0.25	0.2 ug/l	0.02 ug/l
Tetrachloroethene	<0.50	<0.50	<0.50	<0.50	5 ug/l	0.5 ug/l
Toluene	<0.50	<0.50	<0.50	<0.50	1 mg/l	0.2 mg/l
1,1,1-Trichloroethane	<0.50	<0.50	<0.50	<0.50	200 ug/l	40 ug/l
1,1,2-Trichloroethane	<0.16	<0.16	<0.16	<0.16	5 ug/l	0.5 ug/l
Trichloroethene	<0.33	<0.33	<0.33	<0.33	5 ug/l	0.5 ug/l
Vinyl Chloride	<0.18	<0.18	<0.18	<0.18	0.2 ug/l	0.02 ug/l
Total Xylenes	<1.50	<1.50	<1.50	<1.50	10 mg/l	1 mg/l

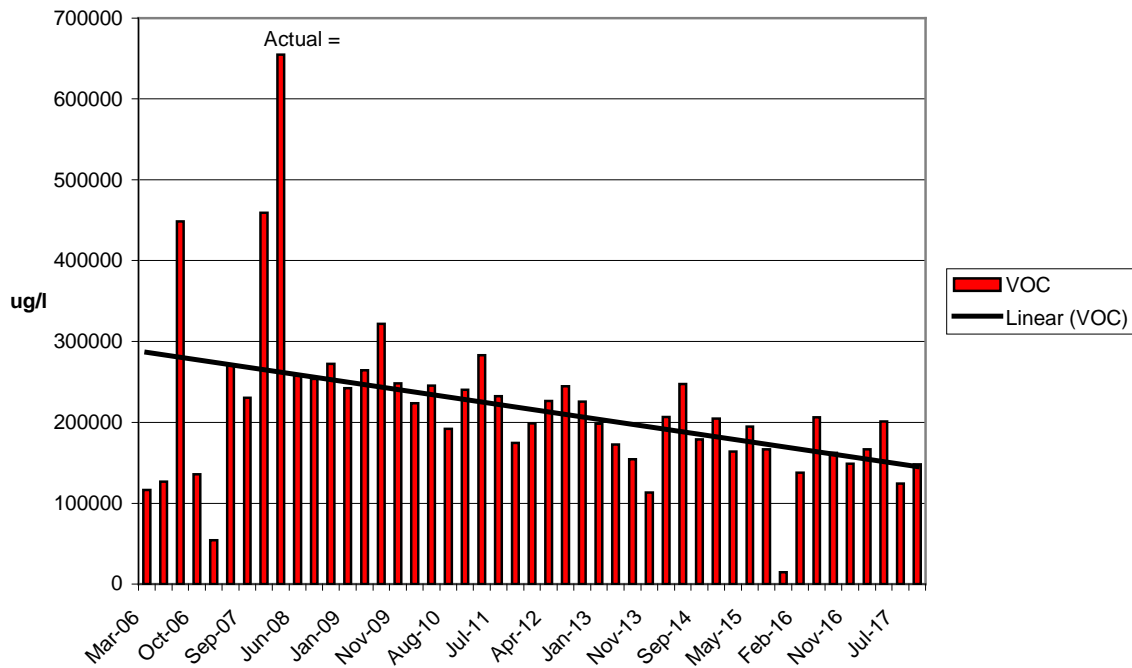
VOCs reported in units of ug/l

B: Analyte detected in the associated Method Blank

J: Analyte detected below quantitation limits

NTF: Not Tested For

CR-3 VOC Concentration



### Groundwater Impacts

The groundwater results obtained from the groundwater samplings performed by Environmental Audits, Inc. at the Twin Disc, Inc. Plant 3 Coolant Release monitoring wells variously exceeded the s. NR 140.10 Public Health related groundwater standards for Acetone, Benzene, Carbon Tetrachloride, Chloroethane, Chloroform, Chloromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,1-Dichloroethane, Methylene Chloride, Naphthalene, Styrene, Tetrachloroethene, 1,1,2,2-Tetrachloroethene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethene, and Vinyl Chloride.

Environmental Audits, Inc. detected Chloroethane, during their October 17, 2017 sampling event, at CR-3 (36,000 ug/l). Environmental Audits, Inc. detected Chloroethane, during their July 20, 2017 sampling event, at CR-3 (29,500 ug/l).

Environmental Audits, Inc. detected Chloroethane, during their April 12, 2017 sampling event, at CR-3 (36,700 ug/l). Environmental Audits, Inc. detected Chloroethane, during their February 22, 2017 sampling event, at CR-3 (28,500 ug/l). The s. NR 140 ES for Chloroethane was exceeded at CR-3 during the Environmental Audits, Inc. February 2017, April 2017, July 20, 2017, and October 17, 2017 sampling event.

Environmental Audits, Inc. detected 1,1-Dichloroethane, during their October 17, 2017 sampling event, at CR-1 (3.2 ug/l), CR-2 (2.1 ug/l), and CR-3 (82,800 ug/l). Environmental Audits, Inc. detected 1,1-Dichloroethane, during their July 20, 2017 sampling event, at CR-1 (0.31 J ug/l), CR-2 (2.5 ug/l), and CR-3 (73,000 ug/l). Environmental Audits, Inc. detected 1,1-Dichloroethane, during their April 12, 2017 sampling event, at CR-1 (0.36 J ug/l), CR-2 (2.0 ug/l), and CR-3 (115,000 ug/l). Environmental Audits, Inc. detected 1,1-Dichloroethane, during their February 22, 2017 sampling event, at CR-2 (0.21ug/l) and CR-3 (98,900 ug/l). The s. NR 140 Enforcement Standard (ES) for 1,1-Dichloroethane is 850 ug/L; the Preventative Action Limit (PAL) is 85 ug/L. The s. NR 140 ES for 1,1-Dichloroethane was exceeded at CR-3 during the Environmental Audits, Inc. February 2017, April 2017, July 20, 2017, and October 17, 2017 sampling event.

Environmental Audits, Inc. detected 1,2-Dichloroethane, during the July 20, 2017 sampling event, at CR-3 (181 J ug/l). The s. NR 140 Enforcement Standard (ES) for 1,2-Dichloroethane is 5 ug/L; the Preventative Action Limit (PAL) is 0.5 ug/L. The s. NR 140 ES for 1,2-Dichloroethane was exceeded at CR-3 during the Environmental Audits, Inc. October 2015 and July 20, 2017 sampling event.

Environmental Audits, Inc. detected 1,1-Dichloroethene, during their October 17, 2017 sampling event, at CR-3 (2,850 ug/l). Environmental Audits, Inc. detected 1,1-Dichloroethene, during their July 20, 2017 sampling event, at CR-3 (2,390 ug/l). Environmental Audits, Inc. detected 1,1-Dichloroethene, during their April 12, 2017 sampling event, at CR-3 (5,520 ug/l). Environmental Audits, Inc. detected 1,1-Dichloroethene, during their February 22, 2017 sampling event, at CR-3 (4,150 ug/l). The s. NR 140 Enforcement Standard (ES) for 1,1-Dichloroethene is 7 ug/L; the Preventative Action Limit (PAL) is 0.7 ug/L. The s. NR 140 ES for 1,1-Dichloroethene was exceeded at CR-3 during the Environmental Audits, Inc. February 2017, April 2017, July 20, 2017, and October 17, 2017 sampling event.

Environmental Audits, Inc. detected cis-1,2-Dichloroethene, during their July 20, 2017 sampling event, at CR-3 (163 J ug/l). The PAL is 7 ug/l and the ES is 70 ug/l for

cis-1,2-Dichloroethene. The ES was exceeded at CR-3 during July 20, 2017 sampling event.

Environmental Audits, Inc. detected Methylene Chloride, during their July 20, 2017 sampling event, at CR-3 (325 J ug/l). Environmental Audits, Inc. detected Methylene Chloride, during their November 10, 2016 sampling event, at CR-3 (656 J ug/l). The PAL is 0.5 ug/l and the ES is 5 ug/l for Methylene Chloride. The s. NR 140 ES for Methylene Chloride was exceeded at CR-3 during the Environmental Audits, Inc. November 2016 and July 20, 2017 sampling event.

Environmental Audits, Inc. detected 1,1,1-Trichloroethane, during their October 17, 2017 sampling event at CR-3 (21,900 ug/l). Environmental Audits, Inc. detected 1,1,1-Trichloroethane, during their July 20, 2017 sampling event at CR-3 (15,200 ug/l). Environmental Audits, Inc. detected 1,1,1-Trichloroethane, during their April 12, 2017 sampling event at CR-3 (38,400 ug/l). Environmental Audits, Inc. detected 1,1,1-Trichloroethane, during their February 22, 2017 sampling event at CR-3 (31,300 ug/l). The s. NR 140 ES for 1,1,1-Trichloroethane is 200 ug/L; the PAL is 40 ug/L. The s. NR 140 ES for 1,1,1-Trichloroethane was exceeded at CR-3 during the Environmental Audits, Inc. February 2017, April 2017, July 20, 2017, and October 17, 2017 sampling event.

Environmental Audits, Inc. detected Trichloroethene, during their July 20, 2017 sampling event, at CR-1 (0.42 J ug/l). Environmental Audits, Inc. detected Trichloroethene, during their November 10, 2016 sampling event, at CR-1 (0.93 J ug/l). The s. NR 140 ES for Trichloroethene is 5 ug/L; the PAL is 0.5 ug/L. The PAL was exceeded at CR-1 during the Environmental Audits November 10, 2016 sampling event.

Environmental Audits, Inc. detected Vinyl Chloride, during their their October 17, 2017 sampling event, at CR-3 (4,390 ug/l). Environmental Audits, Inc. detected Vinyl Chloride, during their July 20, 2017 sampling event, at CR-3 (3,530 ug/l). Environmental Audits, Inc. detected Vinyl Chloride, during their April 12, 2017 sampling event, at CR-3 (5,780 ug/l). Environmental Audits, Inc. detected Vinyl Chloride, during their February 22, 2017 sampling event, at CR-3 (3,770 ug/l). The s. NR 140 ES for Vinyl Chloride is 0.2 ug/L; the PAL is 0.02 ug/L. The s. NR 140 ES for Vinyl Chloride was exceeded at CR-3 during the Environmental Audits, Inc. February 2017, April 2017, July 20, 2017, and October 17, 2017 sampling event.

The above mentioned compounds are "daughter" compounds of 1,1,1-Trichloroethane, an indication that biological/chemical remediation may be occurring. More investigative effort is required to confirm this.

Non-halogenated compounds for which an s. NR 140 Public Health Groundwater Quality Standard ES or PAL has been established that have been detected include the following compounds:

Environmental Audits, Inc. detected Naphthalene, during their May 16, 2016 sampling event, at CR-4 (4.4 J ug/l). The PAL is 8 ug/l and the ES is 40 ug/l for Naphthalene.

1,2,4- Trimethylbenzene was detected, during the Environmental Audits May 16, 2016 sampling event, at CR-4 (1.3 ug/l). The PAL is 7 ug/l and the ES is 70 ug/l for 1,2,4- Trimethylbenzene.

DRO sampling was discontinued as a regular analytical parameter as of the 2<sup>nd</sup> Quarter 2016 groundwater analysis.

#### **Vapor Intrusion:**

A Vapor Intrusion characterization standard was added to the NR716 Site Investigation protocol as 716.05(1) during December 2010. This protocol requires all sites exhibiting VOC/CVOC contamination to conduct a testing program to identify and quantify levels of VOC/CVOC vapors present in the subsurface soils and above surface ambient air. The intent of this new requirement is to prevent exposures that negatively impact human health in terms of excess risk per USEPA and Center for Disease Control (CDC) standards.

As a result of this new legislation, a Vapor Intrusion monitoring program must be implemented in order to obtain Site Closure.

The United States Environmental Protection Agency (USEPA) guidance "OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance)" EPA530-D-02-004, dated November 2002 and the State of Wisconsin Department of Health and Family Services (WI DHFS) Division of Public Health guidance "Chemical Vapor Intrusion and Residential Indoor Air Guidance for Environmental Consultants and Contractors" dated February 13, 2003 were utilized for the evaluation of the Vapor Intrusion Pathway

To that end, Environmental Audits, Inc. placed thirty-two (32) discrete sub-slab sampling ports around and about the Twin Disc, Inc. Plant 3 facility. These sub-slab sampling ports were sampled commencing March 28, 2012 with the latest sub-slab sampling event occurring March 22, 2016.

The OSWER Draft Guidance recommends that an inhabited building generally be considered “near” subsurface contaminants if it is located within approximately 100 ft laterally or vertically of known or interpolated soil gas or groundwater contaminants.<sup>1</sup>

The OSWER Draft Guidance states “Petroleum hydrocarbons biodegrade relatively well in unsaturated soils. Therefore, petroleum-related VOCs generally have to be in “free product” state or groundwater very near, if not in contact with, the building foundation to result in vapor intrusion. In contrast, chlorinated solvents undergo limited biodegradation and can cause a vapor intrusion concern even when the source is a long distance away.”<sup>2</sup>

No residences are located within 100 feet of the building proper and therefore an off-site sub-slab Vapor Intrusion investigation would not appear warranted for this Site.

The sub-slab investigation conducted to date has indicated the presence of Volatile Organic compounds beneath the Twin Disc, Inc. Plant 3 facility. Additional investigative effort is warranted to further identify the effects of seasonality on the detected compounds. Additional sample ports are warranted in the Twin Disc, Inc. Plant 3 Engineering and Human Resource offices to confirm or refute the presence of Volatile Organic Compounds in the theoretical plume beneath these office areas. The complete summary of the Vapor Intrusion findings to date will be included as a standalone document.

### **Conclusions:**

The Site Investigation revealed that the contamination is contained in the soils and groundwater immediately around and about the Tramp Coolant Collection Sump. There is no evidence, from the soil and groundwater investigations conducted to date, that

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1 OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance)” EPA530-D-02-004, dated November 2002, Page 16

2 OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance)” EPA530-D-02-004, dated November 2002, Page 16



groundwater contamination has migrated off site. No additional groundwater monitoring wells appear to be required to optimize monitoring for a natural attenuation groundwater remedy.

Specific Interim Actions undertaken by Twin Disc, Inc. include the following:

s. NR 708.05(l), the measuring for the presence of free product, visually or through field samples or other appropriate methods. Product level readings are being taken in the monitoring wells utilizing a MMC Oil-Water Interface Detector. These readings are being taken periodically and recorded.

s. NR 708.11(2)(c), extracting free product, leachate or groundwater to restrict migration of a contaminate plume. Free product has been removed from CR-3 through the utilization of a mechanical pump commencing during Fall 2013.

A “French Drain” system was installed, during June 2009, in order to enhance the recovery of tramp coolant present in the surficial groundwater. This “French Drain” system is connected to the existing Tramp Coolant Collection Sump enabling collection and off-site treatment.

**Recommendations:**

The primary contamination pathway of concern is the surficial groundwater pathway. The Environmental Audits’ groundwater samplings indicate that several s. NR 140 Public Health Enforcement Standards and Preventative Action Limits are exceeded.

It is recommended that the five (5) monitoring wells continue to be sampled quarterly for USEPA Method 8260 Volatile Organic Compounds.

The next groundwater-sampling round will occur during the 1<sup>st</sup> Quarter 2018.

The objective is to provide effective remediation of the site in both a practical and cost efficient manner.

July 26, 2017

Ed Raymond  
Environmental Audits, Inc  
1409 Hillcrest Circle  
Racine, WI 53406

RE: Project: TD P3 GW  
Pace Project No.: 40153634

Dear Ed Raymond:

Enclosed are the analytical results for sample(s) received by the laboratory on July 21, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: John Ruetz, Environmental Audits Inc



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: TD P3 GW

Pace Project No.: 40153634

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: TD P3 GW

Pace Project No.: 40153634

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40153634001	CR-1	Water	07/20/17 00:00	07/21/17 09:20
40153634002	CR-2	Water	07/20/17 00:00	07/21/17 09:20
40153634003	CR-3	Water	07/20/17 00:00	07/21/17 09:20
40153634004	CR-4	Water	07/20/17 00:00	07/21/17 09:20
40153634005	CR-5	Water	07/20/17 00:00	07/21/17 09:20
40153634006	TRIP BLANK	Water	07/20/17 00:00	07/21/17 09:20

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: TD P3 GW

Pace Project No.: 40153634

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40153634001	CR-1	EPA 8260	LAP	64
40153634002	CR-2	EPA 8260	LAP	64
40153634003	CR-3	EPA 8260	LAP	64
40153634004	CR-4	EPA 8260	LAP	64
40153634005	CR-5	EPA 8260	LAP	64
40153634006	TRIP BLANK	EPA 8260	LAP	64

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: TD P3 GW

Pace Project No.: 40153634

**Sample: CR-1**      **Lab ID: 40153634001**      Collected: 07/20/17 00:00      Received: 07/21/17 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		07/25/17 09:58	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		07/25/17 09:58	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		07/25/17 09:58	79-00-5	
1,1-Dichloroethane	0.31J	ug/L	1.0	0.24	1		07/25/17 09:58	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		07/25/17 09:58	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		07/25/17 09:58	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		07/25/17 09:58	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		07/25/17 09:58	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		07/25/17 09:58	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		07/25/17 09:58	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		07/25/17 09:58	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		07/25/17 09:58	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		07/25/17 09:58	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		07/25/17 09:58	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		07/25/17 09:58	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		07/25/17 09:58	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		07/25/17 09:58	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		07/25/17 09:58	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		07/25/17 09:58	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		07/25/17 09:58	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		07/25/17 09:58	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		07/25/17 09:58	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		07/25/17 09:58	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		07/25/17 09:58	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		07/25/17 09:58	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		07/25/17 09:58	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	127-18-4	

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### ANALYTICAL RESULTS

Project: TD P3 GW  
Pace Project No.: 40153634

**Sample: CR-1**      **Lab ID: 40153634001**      Collected: 07/20/17 00:00      Received: 07/21/17 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Toluene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	108-88-3	
Trichloroethene	0.42J	ug/L	1.0	0.33	1		07/25/17 09:58	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		07/25/17 09:58	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		07/25/17 09:58	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/25/17 09:58	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		07/25/17 09:58	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		07/25/17 09:58	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		07/25/17 09:58	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		07/25/17 09:58	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/25/17 09:58	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		07/25/17 09:58	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	89	%	61-130		1		07/25/17 09:58	460-00-4	
Dibromofluoromethane (S)	104	%	67-130		1		07/25/17 09:58	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		07/25/17 09:58	2037-26-5	

**Sample: CR-2**      **Lab ID: 40153634002**      Collected: 07/20/17 00:00      Received: 07/21/17 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		07/25/17 10:20	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	71-55-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		07/25/17 10:20	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		07/25/17 10:20	79-00-5	
1,1-Dichloroethane	2.5	ug/L	1.0	0.24	1		07/25/17 10:20	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		07/25/17 10:20	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		07/25/17 10:20	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		07/25/17 10:20	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		07/25/17 10:20	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		07/25/17 10:20	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		07/25/17 10:20	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		07/25/17 10:20	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		07/25/17 10:20	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	142-28-9	

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## ANALYTICAL RESULTS

Project: TD P3 GW  
Pace Project No.: 40153634

**Sample: CR-2**      **Lab ID: 40153634002**      Collected: 07/20/17 00:00      Received: 07/21/17 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		07/25/17 10:20	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		07/25/17 10:20	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		07/25/17 10:20	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		07/25/17 10:20	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		07/25/17 10:20	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		07/25/17 10:20	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		07/25/17 10:20	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		07/25/17 10:20	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		07/25/17 10:20	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		07/25/17 10:20	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		07/25/17 10:20	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		07/25/17 10:20	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		07/25/17 10:20	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		07/25/17 10:20	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		07/25/17 10:20	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		07/25/17 10:20	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		07/25/17 10:20	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/25/17 10:20	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		07/25/17 10:20	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:20	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		07/25/17 10:20	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		07/25/17 10:20	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/25/17 10:20	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		07/25/17 10:20	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	89	%	61-130		1		07/25/17 10:20	460-00-4	
Dibromofluoromethane (S)	106	%	67-130		1		07/25/17 10:20	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		07/25/17 10:20	2037-26-5	

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### ANALYTICAL RESULTS

Project: TD P3 GW  
Pace Project No.: 40153634

**Sample: CR-3**      **Lab ID: 40153634003**      Collected: 07/20/17 00:00      Received: 07/21/17 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<90.3	ug/L	500	90.3	500		07/25/17 08:52	630-20-6	
1,1,1-Trichloroethane	15200	ug/L	500	250	500		07/25/17 08:52	71-55-6	
1,1,2,2-Tetrachloroethane	<125	ug/L	500	125	500		07/25/17 08:52	79-34-5	
1,1,2-Trichloroethane	<98.7	ug/L	500	98.7	500		07/25/17 08:52	79-00-5	
1,1-Dichloroethane	73000	ug/L	500	121	500		07/25/17 08:52	75-34-3	
1,1-Dichloroethene	2390	ug/L	500	205	500		07/25/17 08:52	75-35-4	
1,1-Dichloropropene	<221	ug/L	500	221	500		07/25/17 08:52	563-58-6	
1,2,3-Trichlorobenzene	<1070	ug/L	2500	1070	500		07/25/17 08:52	87-61-6	
1,2,3-Trichloropropane	<250	ug/L	500	250	500		07/25/17 08:52	96-18-4	
1,2,4-Trichlorobenzene	<1100	ug/L	2500	1100	500		07/25/17 08:52	120-82-1	
1,2,4-Trimethylbenzene	<250	ug/L	500	250	500		07/25/17 08:52	95-63-6	
1,2-Dibromo-3-chloropropane	<1080	ug/L	2500	1080	500		07/25/17 08:52	96-12-8	
1,2-Dibromoethane (EDB)	<88.9	ug/L	500	88.9	500		07/25/17 08:52	106-93-4	
1,2-Dichlorobenzene	<250	ug/L	500	250	500		07/25/17 08:52	95-50-1	
1,2-Dichloroethane	181J	ug/L	500	84.0	500		07/25/17 08:52	107-06-2	
1,2-Dichloropropane	<117	ug/L	500	117	500		07/25/17 08:52	78-87-5	
1,3,5-Trimethylbenzene	<250	ug/L	500	250	500		07/25/17 08:52	108-67-8	
1,3-Dichlorobenzene	<250	ug/L	500	250	500		07/25/17 08:52	541-73-1	
1,3-Dichloropropane	<250	ug/L	500	250	500		07/25/17 08:52	142-28-9	
1,4-Dichlorobenzene	<250	ug/L	500	250	500		07/25/17 08:52	106-46-7	
2,2-Dichloropropane	<242	ug/L	500	242	500		07/25/17 08:52	594-20-7	
2-Chlorotoluene	<250	ug/L	500	250	500		07/25/17 08:52	95-49-8	
4-Chlorotoluene	<107	ug/L	500	107	500		07/25/17 08:52	106-43-4	
Benzene	<250	ug/L	500	250	500		07/25/17 08:52	71-43-2	
Bromobenzene	<115	ug/L	500	115	500		07/25/17 08:52	108-86-1	
Bromochloromethane	<170	ug/L	500	170	500		07/25/17 08:52	74-97-5	
Bromodichloromethane	<250	ug/L	500	250	500		07/25/17 08:52	75-27-4	
Bromoform	<250	ug/L	500	250	500		07/25/17 08:52	75-25-2	
Bromomethane	<1220	ug/L	2500	1220	500		07/25/17 08:52	74-83-9	
Carbon tetrachloride	<250	ug/L	500	250	500		07/25/17 08:52	56-23-5	
Chlorobenzene	<250	ug/L	500	250	500		07/25/17 08:52	108-90-7	
Chloroethane	29500	ug/L	500	187	500		07/25/17 08:52	75-00-3	
Chloroform	<1250	ug/L	2500	1250	500		07/25/17 08:52	67-66-3	
Chloromethane	<250	ug/L	500	250	500		07/25/17 08:52	74-87-3	
Dibromochloromethane	<250	ug/L	500	250	500		07/25/17 08:52	124-48-1	
Dibromomethane	<213	ug/L	500	213	500		07/25/17 08:52	74-95-3	
Dichlorodifluoromethane	<112	ug/L	500	112	500		07/25/17 08:52	75-71-8	
Diisopropyl ether	<250	ug/L	500	250	500		07/25/17 08:52	108-20-3	
Ethylbenzene	<250	ug/L	500	250	500		07/25/17 08:52	100-41-4	
Hexachloro-1,3-butadiene	<1050	ug/L	2500	1050	500		07/25/17 08:52	87-68-3	
Isopropylbenzene (Cumene)	<71.7	ug/L	500	71.7	500		07/25/17 08:52	98-82-8	
Methyl-tert-butyl ether	<87.1	ug/L	500	87.1	500		07/25/17 08:52	1634-04-4	
Methylene Chloride	325J	ug/L	500	116	500		07/25/17 08:52	75-09-2	B
Naphthalene	<1250	ug/L	2500	1250	500		07/25/17 08:52	91-20-3	
Styrene	<250	ug/L	500	250	500		07/25/17 08:52	100-42-5	
Tetrachloroethene	<250	ug/L	500	250	500		07/25/17 08:52	127-18-4	

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### ANALYTICAL RESULTS

Project: TD P3 GW  
Pace Project No.: 40153634

Sample: CR-3 Lab ID: 40153634003 Collected: 07/20/17 00:00 Received: 07/21/17 09:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Toluene	<250	ug/L	500	250	500		07/25/17 08:52	108-88-3	
Trichloroethene	<165	ug/L	500	165	500		07/25/17 08:52	79-01-6	
Trichlorofluoromethane	<92.5	ug/L	500	92.5	500		07/25/17 08:52	75-69-4	
Vinyl chloride	3530	ug/L	500	87.8	500		07/25/17 08:52	75-01-4	
cis-1,2-Dichloroethene	163J	ug/L	500	128	500		07/25/17 08:52	156-59-2	
cis-1,3-Dichloropropene	<250	ug/L	500	250	500		07/25/17 08:52	10061-01-5	
m&p-Xylene	<500	ug/L	1000	500	500		07/25/17 08:52	179601-23-1	
n-Butylbenzene	<250	ug/L	500	250	500		07/25/17 08:52	104-51-8	
n-Propylbenzene	<250	ug/L	500	250	500		07/25/17 08:52	103-65-1	
o-Xylene	<250	ug/L	500	250	500		07/25/17 08:52	95-47-6	
p-Isopropyltoluene	<250	ug/L	500	250	500		07/25/17 08:52	99-87-6	
sec-Butylbenzene	<1090	ug/L	2500	1090	500		07/25/17 08:52	135-98-8	
tert-Butylbenzene	<90.2	ug/L	500	90.2	500		07/25/17 08:52	98-06-6	
trans-1,2-Dichloroethene	<128	ug/L	500	128	500		07/25/17 08:52	156-60-5	
trans-1,3-Dichloropropene	<115	ug/L	500	115	500		07/25/17 08:52	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	61-130		500		07/25/17 08:52	460-00-4	
Dibromofluoromethane (S)	106	%	67-130		500		07/25/17 08:52	1868-53-7	
Toluene-d8 (S)	102	%	70-130		500		07/25/17 08:52	2037-26-5	

Sample: CR-4 Lab ID: 40153634004 Collected: 07/20/17 00:00 Received: 07/21/17 09:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		07/25/17 10:42	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	71-55-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		07/25/17 10:42	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		07/25/17 10:42	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		07/25/17 10:42	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		07/25/17 10:42	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		07/25/17 10:42	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		07/25/17 10:42	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		07/25/17 10:42	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		07/25/17 10:42	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		07/25/17 10:42	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		07/25/17 10:42	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		07/25/17 10:42	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	142-28-9	

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### ANALYTICAL RESULTS

Project: TD P3 GW

Pace Project No.: 40153634

**Sample: CR-4**      **Lab ID: 40153634004**      Collected: 07/20/17 00:00      Received: 07/21/17 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		07/25/17 10:42	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		07/25/17 10:42	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		07/25/17 10:42	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		07/25/17 10:42	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		07/25/17 10:42	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		07/25/17 10:42	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		07/25/17 10:42	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		07/25/17 10:42	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		07/25/17 10:42	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		07/25/17 10:42	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		07/25/17 10:42	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		07/25/17 10:42	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		07/25/17 10:42	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		07/25/17 10:42	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		07/25/17 10:42	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		07/25/17 10:42	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		07/25/17 10:42	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/25/17 10:42	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		07/25/17 10:42	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		07/25/17 10:42	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		07/25/17 10:42	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		07/25/17 10:42	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/25/17 10:42	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		07/25/17 10:42	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	93	%	61-130		1		07/25/17 10:42	460-00-4	
Dibromofluoromethane (S)	106	%	67-130		1		07/25/17 10:42	1868-53-7	
Toluene-d8 (S)	103	%	70-130		1		07/25/17 10:42	2037-26-5	

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### ANALYTICAL RESULTS

Project: TD P3 GW

Pace Project No.: 40153634

**Sample: CR-5**      **Lab ID: 40153634005**      Collected: 07/20/17 00:00      Received: 07/21/17 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		07/25/17 11:04	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		07/25/17 11:04	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		07/25/17 11:04	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		07/25/17 11:04	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		07/25/17 11:04	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		07/25/17 11:04	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		07/25/17 11:04	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		07/25/17 11:04	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		07/25/17 11:04	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		07/25/17 11:04	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		07/25/17 11:04	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		07/25/17 11:04	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		07/25/17 11:04	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		07/25/17 11:04	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		07/25/17 11:04	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		07/25/17 11:04	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		07/25/17 11:04	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		07/25/17 11:04	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		07/25/17 11:04	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		07/25/17 11:04	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		07/25/17 11:04	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		07/25/17 11:04	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		07/25/17 11:04	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		07/25/17 11:04	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		07/25/17 11:04	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		07/25/17 11:04	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	127-18-4	

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### ANALYTICAL RESULTS

Project: TD P3 GW  
Pace Project No.: 40153634

**Sample: CR-5**      **Lab ID: 40153634005**      Collected: 07/20/17 00:00      Received: 07/21/17 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Toluene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		07/25/17 11:04	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		07/25/17 11:04	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		07/25/17 11:04	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/25/17 11:04	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		07/25/17 11:04	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		07/25/17 11:04	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		07/25/17 11:04	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		07/25/17 11:04	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/25/17 11:04	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		07/25/17 11:04	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	94	%	61-130		1		07/25/17 11:04	460-00-4	
Dibromofluoromethane (S)	105	%	67-130		1		07/25/17 11:04	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		07/25/17 11:04	2037-26-5	

**Sample: TRIP BLANK**      **Lab ID: 40153634006**      Collected: 07/20/17 00:00      Received: 07/21/17 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		07/25/17 15:29	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	71-55-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		07/25/17 15:29	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		07/25/17 15:29	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		07/25/17 15:29	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		07/25/17 15:29	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		07/25/17 15:29	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		07/25/17 15:29	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		07/25/17 15:29	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		07/25/17 15:29	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		07/25/17 15:29	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		07/25/17 15:29	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		07/25/17 15:29	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	142-28-9	

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### ANALYTICAL RESULTS

Project: TD P3 GW

Pace Project No.: 40153634

**Sample: TRIP BLANK**      **Lab ID: 40153634006**      Collected: 07/20/17 00:00      Received: 07/21/17 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		07/25/17 15:29	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		07/25/17 15:29	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		07/25/17 15:29	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		07/25/17 15:29	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		07/25/17 15:29	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		07/25/17 15:29	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		07/25/17 15:29	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		07/25/17 15:29	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		07/25/17 15:29	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		07/25/17 15:29	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		07/25/17 15:29	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		07/25/17 15:29	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		07/25/17 15:29	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		07/25/17 15:29	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		07/25/17 15:29	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		07/25/17 15:29	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		07/25/17 15:29	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/25/17 15:29	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		07/25/17 15:29	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		07/25/17 15:29	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		07/25/17 15:29	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		07/25/17 15:29	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/25/17 15:29	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		07/25/17 15:29	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	88	%	61-130		1		07/25/17 15:29	460-00-4	
Dibromofluoromethane (S)	108	%	67-130		1		07/25/17 15:29	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		07/25/17 15:29	2037-26-5	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: TD P3 GW  
Pace Project No.: 40153634

QC Batch: 262254 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 40153634001, 40153634002, 40153634003, 40153634004, 40153634005, 40153634006

METHOD BLANK: 1544266 Matrix: Water  
Associated Lab Samples: 40153634001, 40153634002, 40153634003, 40153634004, 40153634005, 40153634006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	07/25/17 06:40	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	07/25/17 06:40	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	07/25/17 06:40	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	07/25/17 06:40	
1,1-Dichloroethane	ug/L	<0.24	1.0	07/25/17 06:40	
1,1-Dichloroethene	ug/L	<0.41	1.0	07/25/17 06:40	
1,1-Dichloropropene	ug/L	<0.44	1.0	07/25/17 06:40	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	07/25/17 06:40	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	07/25/17 06:40	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	07/25/17 06:40	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	07/25/17 06:40	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	07/25/17 06:40	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	07/25/17 06:40	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	07/25/17 06:40	
1,2-Dichloroethane	ug/L	<0.17	1.0	07/25/17 06:40	
1,2-Dichloropropane	ug/L	<0.23	1.0	07/25/17 06:40	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	07/25/17 06:40	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	07/25/17 06:40	
1,3-Dichloropropane	ug/L	<0.50	1.0	07/25/17 06:40	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	07/25/17 06:40	
2,2-Dichloropropane	ug/L	<0.48	1.0	07/25/17 06:40	
2-Chlorotoluene	ug/L	<0.50	1.0	07/25/17 06:40	
4-Chlorotoluene	ug/L	<0.21	1.0	07/25/17 06:40	
Benzene	ug/L	<0.50	1.0	07/25/17 06:40	
Bromobenzene	ug/L	<0.23	1.0	07/25/17 06:40	
Bromochloromethane	ug/L	<0.34	1.0	07/25/17 06:40	
Bromodichloromethane	ug/L	<0.50	1.0	07/25/17 06:40	
Bromoform	ug/L	<0.50	1.0	07/25/17 06:40	
Bromomethane	ug/L	<2.4	5.0	07/25/17 06:40	
Carbon tetrachloride	ug/L	<0.50	1.0	07/25/17 06:40	
Chlorobenzene	ug/L	<0.50	1.0	07/25/17 06:40	
Chloroethane	ug/L	<0.37	1.0	07/25/17 06:40	
Chloroform	ug/L	<2.5	5.0	07/25/17 06:40	
Chloromethane	ug/L	<0.50	1.0	07/25/17 06:40	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	07/25/17 06:40	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	07/25/17 06:40	
Dibromochloromethane	ug/L	<0.50	1.0	07/25/17 06:40	
Dibromomethane	ug/L	<0.43	1.0	07/25/17 06:40	
Dichlorodifluoromethane	ug/L	<0.22	1.0	07/25/17 06:40	
Diisopropyl ether	ug/L	<0.50	1.0	07/25/17 06:40	
Ethylbenzene	ug/L	<0.50	1.0	07/25/17 06:40	

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### QUALITY CONTROL DATA

Project: TD P3 GW  
Pace Project No.: 40153634

METHOD BLANK: 1544266

Matrix: Water

Associated Lab Samples: 40153634001, 40153634002, 40153634003, 40153634004, 40153634005, 40153634006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	07/25/17 06:40	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	07/25/17 06:40	
m&p-Xylene	ug/L	<1.0	2.0	07/25/17 06:40	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	07/25/17 06:40	
Methylene Chloride	ug/L	0.29J	1.0	07/25/17 06:40	
n-Butylbenzene	ug/L	<0.50	1.0	07/25/17 06:40	
n-Propylbenzene	ug/L	<0.50	1.0	07/25/17 06:40	
Naphthalene	ug/L	<2.5	5.0	07/25/17 06:40	
o-Xylene	ug/L	<0.50	1.0	07/25/17 06:40	
p-Isopropyltoluene	ug/L	<0.50	1.0	07/25/17 06:40	
sec-Butylbenzene	ug/L	<2.2	5.0	07/25/17 06:40	
Styrene	ug/L	<0.50	1.0	07/25/17 06:40	
tert-Butylbenzene	ug/L	<0.18	1.0	07/25/17 06:40	
Tetrachloroethene	ug/L	<0.50	1.0	07/25/17 06:40	
Toluene	ug/L	<0.50	1.0	07/25/17 06:40	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	07/25/17 06:40	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	07/25/17 06:40	
Trichloroethene	ug/L	<0.33	1.0	07/25/17 06:40	
Trichlorofluoromethane	ug/L	<0.18	1.0	07/25/17 06:40	
Vinyl chloride	ug/L	<0.18	1.0	07/25/17 06:40	
4-Bromofluorobenzene (S)	%	93	61-130	07/25/17 06:40	
Dibromofluoromethane (S)	%	107	67-130	07/25/17 06:40	
Toluene-d8 (S)	%	101	70-130	07/25/17 06:40	

LABORATORY CONTROL SAMPLE: 1544267

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	60.7	121	70-130	
1,1,1,2-Tetrachloroethane	ug/L	50	52.6	105	70-130	
1,1,2-Trichloroethane	ug/L	50	54.3	109	70-130	
1,1-Dichloroethane	ug/L	50	55.1	110	71-132	
1,1-Dichloroethene	ug/L	50	57.2	114	75-130	
1,2,4-Trichlorobenzene	ug/L	50	46.4	93	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	50.3	101	63-123	
1,2-Dibromoethane (EDB)	ug/L	50	54.2	108	70-130	
1,2-Dichlorobenzene	ug/L	50	55.3	111	70-130	
1,2-Dichloroethane	ug/L	50	53.9	108	70-131	
1,2-Dichloropropane	ug/L	50	52.4	105	80-120	
1,3-Dichlorobenzene	ug/L	50	52.7	105	70-130	
1,4-Dichlorobenzene	ug/L	50	55.9	112	70-130	
Benzene	ug/L	50	53.5	107	73-145	
Bromodichloromethane	ug/L	50	55.8	112	70-130	
Bromoform	ug/L	50	52.0	104	67-130	
Bromomethane	ug/L	50	52.4	105	26-128	

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### QUALITY CONTROL DATA

Project: TD P3 GW  
Pace Project No.: 40153634

LABORATORY CONTROL SAMPLE: 1544267

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	61.0	122	70-133	
Chlorobenzene	ug/L	50	53.5	107	70-130	
Chloroethane	ug/L	50	56.7	113	58-120	
Chloroform	ug/L	50	55.9	112	80-121	
Chloromethane	ug/L	50	43.9	88	40-127	
cis-1,2-Dichloroethene	ug/L	50	55.5	111	70-130	
cis-1,3-Dichloropropene	ug/L	50	53.8	108	70-130	
Dibromochloromethane	ug/L	50	57.3	115	70-130	
Dichlorodifluoromethane	ug/L	50	52.6	105	20-135	
Ethylbenzene	ug/L	50	56.2	112	87-129	
Isopropylbenzene (Cumene)	ug/L	50	56.3	113	70-130	
m&p-Xylene	ug/L	100	114	114	70-130	
Methyl-tert-butyl ether	ug/L	50	56.8	114	66-143	
Methylene Chloride	ug/L	50	52.2	104	70-130	
o-Xylene	ug/L	50	56.7	113	70-130	
Styrene	ug/L	50	57.3	115	70-130	
Tetrachloroethene	ug/L	50	55.5	111	70-130	
Toluene	ug/L	50	55.3	111	82-130	
trans-1,2-Dichloroethene	ug/L	50	57.2	114	75-132	
trans-1,3-Dichloropropene	ug/L	50	51.7	103	70-130	
Trichloroethene	ug/L	50	57.1	114	70-130	
Trichlorofluoromethane	ug/L	50	60.4	121	76-133	
Vinyl chloride	ug/L	50	55.0	110	57-136	
4-Bromofluorobenzene (S)	%			100	61-130	
Dibromofluoromethane (S)	%			104	67-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1544529 1544530

Parameter	Units	40153675002		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
1,1,1-Trichloroethane	ug/L	<0.50	50	50	56.6	58.0	113	116	70-134	3	20		
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	50.7	50.8	101	102	70-130	0	20		
1,1,2-Trichloroethane	ug/L	<0.20	50	50	52.3	54.4	105	109	70-130	4	20		
1,1-Dichloroethane	ug/L	<0.24	50	50	52.9	55.9	106	112	71-133	6	20		
1,1-Dichloroethene	ug/L	<0.41	50	50	55.5	55.7	111	111	75-136	0	20		
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	47.8	46.2	96	92	70-130	3	20		
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	48.0	48.8	96	98	63-123	2	20		
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	50.8	56.2	102	112	70-130	10	20		
1,2-Dichlorobenzene	ug/L	<0.50	50	50	53.5	50.6	107	101	70-130	6	20		
1,2-Dichloroethane	ug/L	<0.17	50	50	51.2	52.9	102	106	70-131	3	20		
1,2-Dichloropropane	ug/L	<0.23	50	50	50.1	51.5	100	103	80-120	3	20		
1,3-Dichlorobenzene	ug/L	<0.50	50	50	53.0	50.7	106	101	70-130	4	20		
1,4-Dichlorobenzene	ug/L	<0.50	50	50	52.4	53.4	105	107	70-130	2	20		

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### QUALITY CONTROL DATA

Project: TD P3 GW  
Pace Project No.: 40153634

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1544529		1544530		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		40153675002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Benzene	ug/L	<0.50	50	50	51.6	52.6	103	105	73-145	2	20		
Bromodichloromethane	ug/L	<0.50	50	50	53.4	56.0	107	112	70-130	5	20		
Bromoform	ug/L	<0.50	50	50	49.6	51.9	99	104	67-130	5	20		
Bromomethane	ug/L	<2.4	50	50	56.7	53.3	113	107	26-129	6	20		
Carbon tetrachloride	ug/L	<0.50	50	50	58.8	58.8	118	118	70-134	0	20		
Chlorobenzene	ug/L	<0.50	50	50	51.2	54.2	102	108	70-130	6	20		
Chloroethane	ug/L	<0.37	50	50	54.6	55.4	109	111	58-120	1	20		
Chloroform	ug/L	<2.5	50	50	53.5	55.3	107	111	80-121	3	20		
Chloromethane	ug/L	<0.50	50	50	42.0	43.3	84	87	40-128	3	20		
cis-1,2-Dichloroethene	ug/L	0.89J	50	50	53.9	56.4	106	111	70-130	5	20		
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	52.0	54.0	104	108	70-130	4	20		
Dibromochloromethane	ug/L	<0.50	50	50	54.5	56.9	109	114	70-130	4	20		
Dichlorodifluoromethane	ug/L	<0.22	50	50	50.3	52.4	101	105	20-146	4	20		
Ethylbenzene	ug/L	<0.50	50	50	53.3	56.2	107	112	87-129	5	20		
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	52.5	56.1	105	112	70-130	7	20		
m&p-Xylene	ug/L	<1.0	100	100	106	112	106	112	70-130	6	20		
Methyl-tert-butyl ether	ug/L	<0.17	50	50	54.2	55.7	108	111	66-143	3	20		
Methylene Chloride	ug/L	<0.23	50	50	50.4	51.0	101	102	70-130	1	20		
o-Xylene	ug/L	<0.50	50	50	53.8	56.9	108	114	70-130	6	20		
Styrene	ug/L	<0.50	50	50	54.6	57.1	109	114	70-130	4	20		
Tetrachloroethene	ug/L	<0.50	50	50	53.0	55.4	106	111	70-130	4	20		
Toluene	ug/L	<0.50	50	50	52.7	55.2	105	110	82-131	5	20		
trans-1,2-Dichloroethene	ug/L	1.4	50	50	55.7	56.2	108	110	75-135	1	20		
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	49.7	51.7	99	103	70-130	4	20		
Trichloroethene	ug/L	8.4	50	50	61.3	63.5	106	110	70-130	4	20		
Trichlorofluoromethane	ug/L	<0.18	50	50	57.5	59.7	115	119	76-150	4	20		
Vinyl chloride	ug/L	<0.18	50	50	53.2	54.6	106	109	56-143	3	20		
4-Bromofluorobenzene (S)	%						99	103	61-130				
Dibromofluoromethane (S)	%						104	103	67-130				
Toluene-d8 (S)	%						98	101	70-130				

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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## QUALIFIERS

Project: TD P3 GW

Pace Project No.: 40153634

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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 LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

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 at or above the adjusted LOD.

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.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: TD P3 GW

Pace Project No.: 40153634

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40153634001	CR-1	EPA 8260	262254		
40153634002	CR-2	EPA 8260	262254		
40153634003	CR-3	EPA 8260	262254		
40153634004	CR-4	EPA 8260	262254		
40153634005	CR-5	EPA 8260	262254		
40153634006	TRIP BLANK	EPA 8260	262254		

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# CHAIN-OF-CUSTODY / Analytical Request Document

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

20157634

Section A Required Client Information: Company: Environmental Audits Inc. Address: 11327 W Lincoln Avenue West Allis WI 53051

Section B Required Project Information: Report To: jrtruetz@yahoo.com; Copy To: eeri@wi.rr.com; john@environmentalaudits.net; Purchase Order No.: Verbal; Project Name: TD P3 GW

Section C Invoice Information: Attention: John Ruetz; Company Name: Environmental Audits Inc.; Address: 11327 W Lincoln Avenue

REGULATORY AGENCY:  NPDES  GROUND WATER  DRINKING WATER  UST  RCRA  OTHER

Site Location STATE: WI

Page: 1 of 1 Page 20 of 21

Section D Valid Matrix Codes: DRINKING WATER (DW), WASTE WATER (WW), WASTE WATER PRODUCT (P), SOIL/SOLID (SL), OIL (OL), WIP (WP), AIR (AR), OTHER (OT), TISSUE (TS)

Matrix Code: (see valid codes to left)

Sample Type: (G=GRAB C=COMP)

Collected: Composite Start, Composite End/Grab

Preservatives: Unpreserved, H<sub>2</sub>SO<sub>4</sub>, HNO<sub>3</sub>, HCl, NaOH, Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, Methanol, Other

Analysis Test: VOC

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

Pace Project No./ Lab I.D.

ITEM #	Section D Required Client Information	Valid Matrix Codes	MATRIX CODE	SAMPLE TYPE	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	CR-1	OG1	GW	G	7/20/17					3	X				3-40mLVB
2	CR-2	OG2	GW	G	7/20/17					3	X				3-40mLVB
3	CR-3	OG3	GW	G	7/20/17					3	X				3-40mLVB
4	CR-4	OG4	GW	G	7/20/17					3	X				3-40mLVB
5	CR-5	OG5	GW	G	7/20/17					3	X				3-40mLVB
6	Trip Blank														2-40mLVB
7															
8															
9															
10															
11															
12															

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Stephanie Wagner	7/20/17	1530	Mary Jaraman	7/20/17	1530	
Mary Jaraman	7/20/17	1600	Mary Jaraman	7/20/17	1530	
CS Logistics	7/21/17	0920	Kimberly Kiefer	7/21/17	0920	ROI

ADDITIONAL COMMENTS: D-Trip Blank added to COC by lab. 7-21-17 KR

SAMPLER NAME AND SIGNATURE: PRINT Name of SAMPLER: Stephanie Wagner; SIGNATURE of SAMPLER: [Signature]; DATE Signed (MM/DD/YY): 7/20/17

Temp in °C: \_\_\_\_\_

Received on Ice (Y/N): \_\_\_\_\_

Custody Sealed Cooler (Y/N): \_\_\_\_\_

Samples Intact (Y/N): \_\_\_\_\_

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.08, 12-Oct-2007



Sample Condition Upon Receipt

Pace Analytical Services, LLC. - Green Bay WI
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Client Name: Env. Adv Audits

Project #: WO#: 40153634

Courier: CS Logistics



Custody Seal on Cooler/Box Present: yes no
Custody Seal on Samples Present: yes no
Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used: NA
Type of Ice: Wet Blue Dry None
Cooler Temperature: Uncorr: RB / Corr:
Biological Tissue is Frozen: yes no

Temp Blank Present: yes no

Person examining contents:
Date: 7-21-17
Initials: KR

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Comments:

Table with 15 rows of inspection items and checkboxes. Includes items like Chain of Custody Present, Samples Arrived within Hold Time, Short Hold Time Analysis, Rush Turn Around Time Requested, Sufficient Volume, Containers Intact, Filtered volume received for Dissolved tests, Sample Labels match COC, All containers needing preservation have been checked, Headspace in VOA Vials, Trip Blank Present, Trip Blank Custody Seals Present, Pace Trip Blank Lot #.

Client Notification/ Resolution:
Person Contacted:
Date/Time:
Comments/ Resolution: 003 will be placed in Free Product due to matrix

Project Manager Review: KR for DM
Date: 7/24/17

July 05, 2018

John Ruetz  
Environmental Audits Inc  
11327 W Lincoln Ave  
West Allis, WI 53227


RE: Project: TD P3 2ND QTR GW  
Pace Project No.: 40171655

Dear John Ruetz:

Enclosed are the analytical results for sample(s) received by the laboratory on June 28, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Ed Raymond, Environmental Audits, Inc  
Stephanie Wagner, Environmental Audits, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: TD P3 2ND QTR GW

Pace Project No.: 40171655

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: TD P3 2ND QTR GW  
Pace Project No.: 40171655

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
40171655001	CR-5	Water	06/27/18 00:00	06/28/18 09:30

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### SAMPLE ANALYTE COUNT

Project: TD P3 2ND QTR GW

Pace Project No.: 40171655

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Method</b>	<b>Analysts</b>	<b>Analytes Reported</b>
40171655001	CR-5	EPA 8260	HNW	64

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: TD P3 2ND QTR GW

Pace Project No.: 40171655

**Sample: CR-5**      **Lab ID: 40171655001**      Collected: 06/27/18 00:00      Received: 06/28/18 09:30      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		07/03/18 13:57	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		07/03/18 13:57	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		07/03/18 13:57	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		07/03/18 13:57	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		07/03/18 13:57	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		07/03/18 13:57	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		07/03/18 13:57	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		07/03/18 13:57	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		07/03/18 13:57	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		07/03/18 13:57	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		07/03/18 13:57	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		07/03/18 13:57	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		07/03/18 13:57	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		07/03/18 13:57	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		07/03/18 13:57	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		07/03/18 13:57	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		07/03/18 13:57	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		07/03/18 13:57	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		07/03/18 13:57	67-66-3	
Chloromethane	0.62J	ug/L	1.0	0.50	1		07/03/18 13:57	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		07/03/18 13:57	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		07/03/18 13:57	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		07/03/18 13:57	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		07/03/18 13:57	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		07/03/18 13:57	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		07/03/18 13:57	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		07/03/18 13:57	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	127-18-4	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: TD P3 2ND QTR GW

Pace Project No.: 40171655

**Sample: CR-5**      **Lab ID: 40171655001**      Collected: 06/27/18 00:00      Received: 06/28/18 09:30      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Toluene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		07/03/18 13:57	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		07/03/18 13:57	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		07/03/18 13:57	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/03/18 13:57	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		07/03/18 13:57	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		07/03/18 13:57	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		07/03/18 13:57	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		07/03/18 13:57	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		07/03/18 13:57	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		07/03/18 13:57	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	96	%	70-130		1		07/03/18 13:57	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		07/03/18 13:57	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		07/03/18 13:57	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: TD P3 2ND QTR GW  
Pace Project No.: 40171655

QC Batch: 293241 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 40171655001

METHOD BLANK: 1714849 Matrix: Water  
Associated Lab Samples: 40171655001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	07/03/18 06:47	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	07/03/18 06:47	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	07/03/18 06:47	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	07/03/18 06:47	
1,1-Dichloroethane	ug/L	<0.24	1.0	07/03/18 06:47	
1,1-Dichloroethene	ug/L	<0.41	1.0	07/03/18 06:47	
1,1-Dichloropropene	ug/L	<0.44	1.0	07/03/18 06:47	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	07/03/18 06:47	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	07/03/18 06:47	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	07/03/18 06:47	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	07/03/18 06:47	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	07/03/18 06:47	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	07/03/18 06:47	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	07/03/18 06:47	
1,2-Dichloroethane	ug/L	<0.17	1.0	07/03/18 06:47	
1,2-Dichloropropane	ug/L	<0.23	1.0	07/03/18 06:47	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	07/03/18 06:47	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	07/03/18 06:47	
1,3-Dichloropropane	ug/L	<0.50	1.0	07/03/18 06:47	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	07/03/18 06:47	
2,2-Dichloropropane	ug/L	<0.48	1.0	07/03/18 06:47	
2-Chlorotoluene	ug/L	<0.50	1.0	07/03/18 06:47	
4-Chlorotoluene	ug/L	<0.21	1.0	07/03/18 06:47	
Benzene	ug/L	<0.50	1.0	07/03/18 06:47	
Bromobenzene	ug/L	<0.23	1.0	07/03/18 06:47	
Bromochloromethane	ug/L	<0.34	1.0	07/03/18 06:47	
Bromodichloromethane	ug/L	<0.50	1.0	07/03/18 06:47	
Bromoform	ug/L	<0.50	1.0	07/03/18 06:47	
Bromomethane	ug/L	<2.4	5.0	07/03/18 06:47	
Carbon tetrachloride	ug/L	<0.50	1.0	07/03/18 06:47	
Chlorobenzene	ug/L	<0.50	1.0	07/03/18 06:47	
Chloroethane	ug/L	<0.37	1.0	07/03/18 06:47	
Chloroform	ug/L	<2.5	5.0	07/03/18 06:47	
Chloromethane	ug/L	<0.50	1.0	07/03/18 06:47	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	07/03/18 06:47	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	07/03/18 06:47	
Dibromochloromethane	ug/L	<0.50	1.0	07/03/18 06:47	
Dibromomethane	ug/L	<0.43	1.0	07/03/18 06:47	
Dichlorodifluoromethane	ug/L	<0.22	1.0	07/03/18 06:47	
Diisopropyl ether	ug/L	<0.50	1.0	07/03/18 06:47	
Ethylbenzene	ug/L	<0.50	1.0	07/03/18 06:47	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: TD P3 2ND QTR GW  
Pace Project No.: 40171655

METHOD BLANK: 1714849 Matrix: Water  
Associated Lab Samples: 40171655001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	07/03/18 06:47	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	07/03/18 06:47	
m&p-Xylene	ug/L	<1.0	2.0	07/03/18 06:47	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	07/03/18 06:47	
Methylene Chloride	ug/L	<0.23	1.0	07/03/18 06:47	
n-Butylbenzene	ug/L	<0.50	1.0	07/03/18 06:47	
n-Propylbenzene	ug/L	<0.50	1.0	07/03/18 06:47	
Naphthalene	ug/L	<2.5	5.0	07/03/18 06:47	
o-Xylene	ug/L	<0.50	1.0	07/03/18 06:47	
p-Isopropyltoluene	ug/L	<0.50	1.0	07/03/18 06:47	
sec-Butylbenzene	ug/L	<2.2	5.0	07/03/18 06:47	
Styrene	ug/L	<0.50	1.0	07/03/18 06:47	
tert-Butylbenzene	ug/L	<0.18	1.0	07/03/18 06:47	
Tetrachloroethene	ug/L	<0.50	1.0	07/03/18 06:47	
Toluene	ug/L	<0.50	1.0	07/03/18 06:47	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	07/03/18 06:47	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	07/03/18 06:47	
Trichloroethene	ug/L	<0.33	1.0	07/03/18 06:47	
Trichlorofluoromethane	ug/L	<0.18	1.0	07/03/18 06:47	
Vinyl chloride	ug/L	<0.18	1.0	07/03/18 06:47	
4-Bromofluorobenzene (S)	%	94	70-130	07/03/18 06:47	
Dibromofluoromethane (S)	%	97	70-130	07/03/18 06:47	
Toluene-d8 (S)	%	96	70-130	07/03/18 06:47	

LABORATORY CONTROL SAMPLE: 1714850

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	49.4	99	70-133	
1,1,1,2-Tetrachloroethane	ug/L	50	51.6	103	67-130	
1,1,2-Trichloroethane	ug/L	50	47.3	95	70-130	
1,1-Dichloroethane	ug/L	50	42.8	86	70-134	
1,1-Dichloroethene	ug/L	50	46.8	94	75-132	
1,2,4-Trichlorobenzene	ug/L	50	53.1	106	68-130	
1,2-Dibromo-3-chloropropane	ug/L	50	45.7	91	60-126	
1,2-Dibromoethane (EDB)	ug/L	50	48.1	96	70-130	
1,2-Dichlorobenzene	ug/L	50	49.0	98	70-130	
1,2-Dichloroethane	ug/L	50	47.0	94	73-134	
1,2-Dichloropropane	ug/L	50	45.4	91	79-128	
1,3-Dichlorobenzene	ug/L	50	49.8	100	70-130	
1,4-Dichlorobenzene	ug/L	50	47.9	96	70-130	
Benzene	ug/L	50	49.0	98	69-137	
Bromodichloromethane	ug/L	50	48.1	96	70-130	
Bromoform	ug/L	50	45.8	92	64-133	
Bromomethane	ug/L	50	31.9	64	29-123	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: TD P3 2ND QTR GW

Pace Project No.: 40171655

LABORATORY CONTROL SAMPLE: 1714850

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	48.5	97	73-142	
Chlorobenzene	ug/L	50	48.1	96	70-130	
Chloroethane	ug/L	50	40.6	81	59-133	
Chloroform	ug/L	50	46.7	93	80-129	
Chloromethane	ug/L	50	41.0	82	27-125	
cis-1,2-Dichloroethene	ug/L	50	48.6	97	70-134	
cis-1,3-Dichloropropene	ug/L	50	42.6	85	70-130	
Dibromochloromethane	ug/L	50	45.6	91	70-130	
Dichlorodifluoromethane	ug/L	50	41.5	83	12-127	
Ethylbenzene	ug/L	50	50.7	101	86-127	
Isopropylbenzene (Cumene)	ug/L	50	52.0	104	70-130	
m&p-Xylene	ug/L	100	100	100	70-131	
Methyl-tert-butyl ether	ug/L	50	37.5	75	65-136	
Methylene Chloride	ug/L	50	40.3	81	72-133	
o-Xylene	ug/L	50	51.1	102	70-130	
Styrene	ug/L	50	49.2	98	70-130	
Tetrachloroethene	ug/L	50	47.8	96	70-130	
Toluene	ug/L	50	48.5	97	84-124	
trans-1,2-Dichloroethene	ug/L	50	43.4	87	70-133	
trans-1,3-Dichloropropene	ug/L	50	41.9	84	67-130	
Trichloroethene	ug/L	50	49.3	99	70-130	
Trichlorofluoromethane	ug/L	50	48.9	98	69-147	
Vinyl chloride	ug/L	50	41.8	84	48-134	
4-Bromofluorobenzene (S)	%			102	70-130	
Dibromofluoromethane (S)	%			101	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1714851 1714852

Parameter	Units	40171652003		MSD		MSD		% Rec	% Rec	% Rec	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
1,1,1-Trichloroethane	ug/L	<0.50	50	50	48.9	52.6	98	105	70-136	7	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	49.9	53.8	100	108	67-133	7	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	45.1	49.5	90	99	70-130	9	20	
1,1-Dichloroethane	ug/L	<0.24	50	50	41.8	44.0	84	88	70-139	5	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	45.3	46.5	91	93	72-137	3	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	51.2	54.3	101	108	68-130	6	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	44.3	48.8	89	98	60-130	10	21	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	46.0	50.0	92	100	70-130	8	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	48.9	51.5	98	103	70-130	5	20	
1,2-Dichloroethane	ug/L	<0.17	50	50	46.9	49.6	94	99	71-137	6	20	
1,2-Dichloropropane	ug/L	<0.23	50	50	44.8	49.0	90	98	78-130	9	20	
1,3-Dichlorobenzene	ug/L	<0.50	50	50	50.5	53.0	101	106	70-130	5	20	
1,4-Dichlorobenzene	ug/L	<0.50	50	50	48.0	50.8	96	101	70-130	6	20	

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### QUALITY CONTROL DATA

Project: TD P3 2ND QTR GW

Pace Project No.: 40171655

Parameter	Units	40171652003		1714851		1714852		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Benzene	ug/L	<0.50	50	50	48.6	51.4	97	102	66-143	6	20		
Bromodichloromethane	ug/L	<0.50	50	50	48.5	51.1	96	102	70-130	5	20		
Bromoform	ug/L	<0.50	50	50	42.8	47.9	86	96	64-134	11	20		
Bromomethane	ug/L	<2.4	50	50	33.4	36.1	67	72	29-136	8	25		
Carbon tetrachloride	ug/L	<0.50	50	50	48.7	51.5	97	103	73-142	5	20		
Chlorobenzene	ug/L	<0.50	50	50	47.1	50.7	94	101	70-130	7	20		
Chloroethane	ug/L	<0.37	50	50	41.8	41.7	84	83	58-138	0	20		
Chloroform	ug/L	<2.5	50	50	48.1	49.3	94	97	80-131	2	20		
Chloromethane	ug/L	<0.50	50	50	40.8	44.8	81	89	24-125	9	20		
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	48.6	51.1	97	102	68-137	5	22		
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	43.0	45.1	86	90	70-130	5	20		
Dibromochloromethane	ug/L	<0.50	50	50	45.5	48.9	91	98	70-131	7	20		
Dichlorodifluoromethane	ug/L	<0.22	50	50	39.8	42.3	80	85	10-127	6	20		
Ethylbenzene	ug/L	<0.50	50	50	49.3	53.8	99	108	81-136	9	20		
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	51.0	54.7	102	109	70-132	7	20		
m&p-Xylene	ug/L	<1.0	100	100	97.8	106	98	106	70-135	8	20		
Methyl-tert-butyl ether	ug/L	<0.17	50	50	35.7	38.3	71	77	58-142	7	23		
Methylene Chloride	ug/L	<0.23	50	50	41.0	43.3	82	86	69-137	5	20		
o-Xylene	ug/L	<0.50	50	50	50.5	54.1	101	108	70-132	7	20		
Styrene	ug/L	<0.50	50	50	48.3	52.5	97	105	70-130	8	20		
Tetrachloroethene	ug/L	<0.50	50	50	46.3	50.0	93	100	70-132	8	20		
Toluene	ug/L	<0.50	50	50	48.4	51.6	97	103	81-130	6	20		
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	43.3	45.5	87	91	70-136	5	20		
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	41.5	44.5	83	89	67-130	7	20		
Trichloroethene	ug/L	<0.33	50	50	48.6	51.8	97	104	70-131	6	20		
Trichlorofluoromethane	ug/L	<0.18	50	50	48.0	50.3	96	101	66-150	5	20		
Vinyl chloride	ug/L	<0.18	50	50	41.7	44.8	83	90	46-134	7	20		
4-Bromofluorobenzene (S)	%						102	105	70-130				
Dibromofluoromethane (S)	%						100	100	70-130				
Toluene-d8 (S)	%						95	96	70-130				

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## QUALIFIERS

Project: TD P3 2ND QTR GW

Pace Project No.: 40171655

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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 LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

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 at or above the adjusted LOD.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TD P3 2ND QTR GW

Pace Project No.: 40171655

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
40171655001	CR-5	EPA 8260	293241		

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### REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY / Analytical Request Document

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

40171655

<b>Section A</b> Required Client Information: Company: Environmental Audits Inc. Address: 11327 W Lincoln Avenue West Allis WI 53051 Email To: John@environmentalaudits.net Phone: 414-226-5563 Fax: Requested Due Date/AT:		<b>Section B</b> Required Project Information: Report To: jrnetz@yahoo.com Copy To: eerjii@wi.rr.com, john@environmentalaudits.net Purchase Order No.: Verbal Project Name: TD P3 2nd Qtr GW Project Number:		<b>Section C</b> Invoice Information: Attention: John Ruetz Company Name: Environmental Audits Inc. Address: 11327 W Lincoln Avenue Pace Quote Reference: Pace Project Manager: Pace Profile #:	
<b>REGULATORY AGENCY</b> <input type="checkbox"/> NPDES <input checked="" type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER		Site Location STATE: WI		Temp in °C	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Requested Analysis Filtered (Y/N)		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.		
				COMPOSITE START	COMPOSITE END/GRAB			H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	Analysis Test	VOC				
1	AWL	MM 24	GW	6/27/18	6/27/18		3													
2		CR-5	GW	6/27/18			3													
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

<b>Section D</b> ADDITIONAL COMMENTS Relinquished by / Affiliation: Stephanie Wagner Date: 6/27/18 Time: 1330 Accepted by / Affiliation: Mary Farnum Date: 4/22/18 Time: 1330		Relinquished by / Affiliation: Stephanie Wagner Date: 6/27/18 Time: 1330 Accepted by / Affiliation: Mary Farnum Date: 4/22/18 Time: 1330		Relinquished by / Affiliation: Stephanie Wagner Date: 6/27/18 Time: 1330 Accepted by / Affiliation: Mary Farnum Date: 4/22/18 Time: 1330	
Relinquished by / Affiliation: Stephanie Wagner Date: 6/27/18 Time: 1330 Accepted by / Affiliation: Mary Farnum Date: 4/22/18 Time: 1330		Relinquished by / Affiliation: Stephanie Wagner Date: 6/27/18 Time: 1330 Accepted by / Affiliation: Mary Farnum Date: 4/22/18 Time: 1330		Relinquished by / Affiliation: Stephanie Wagner Date: 6/27/18 Time: 1330 Accepted by / Affiliation: Mary Farnum Date: 4/22/18 Time: 1330	

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoice not paid within 30 days.

F-ALL-Q-020rev.08, 12-Oct-2007

**Sample Preservation Receipt Form**

Client Name: Environmental Audits Project # 40171655

All containers needing preservation have been checked and noted below:  Yes  No  N/A  
 Lab Lot# of pH paper: \_\_\_\_\_ Lab Sid #ID of preservation (if pH adjusted): \_\_\_\_\_

Initial when completed:

Date/Time:


Pace Analytical Services, LLC  
 1241 Bellevue Street, Suite 9  
 Green Bay, WI 54302

Pace Lab #	Glass	Plastic	Vials	Jars	General		VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (ml)
					SP5T	ZPLC							
001													2.5 / 5 / 10
002													2.5 / 5 / 10
003													2.5 / 5 / 10
004													2.5 / 5 / 10
005													2.5 / 5 / 10
006													2.5 / 5 / 10
007													2.5 / 5 / 10
008													2.5 / 5 / 10
009													2.5 / 5 / 10
010													2.5 / 5 / 10
011													2.5 / 5 / 10
012													2.5 / 5 / 10
013													2.5 / 5 / 10
014													2.5 / 5 / 10
015													2.5 / 5 / 10
016													2.5 / 5 / 10
017													2.5 / 5 / 10
018													2.5 / 5 / 10
019													2.5 / 5 / 10
020													2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: \_\_\_\_\_


Headspace in VOA Vials (<6mm) :  Yes  No  N/A \*if yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 ml amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 ml plastic HNO3	DG9T	40 ml amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 ml amber glass H2SO4	BP2Z	500 ml plastic NaOH, Znact	VG9U	40 ml clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 ml amber glass unpres	BP3U	250 ml plastic unpres	VG9H	40 ml clear vial HCL	SP5T	120 ml plastic Na Thiosulfate
AG5U	100 ml amber glass unpres	BP3C	250 ml plastic NaOH	VG9M	40 ml clear vial MeOH		
AG2S	500 ml amber glass H2SO4	BP3N	250 ml plastic HNO3	VG9D	40 ml clear vial DI		
BG3U	250 ml clear glass unpres	BP3S	250 ml plastic H2SO4			ZPLC	ziploc bag
						GN:	

 1241 Bellevue Street, Green Bay, WI 54302	Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: 25Apr2018
	Document No.: <b>F-GB-C-031-Rev.07</b>	Issuing Authority: Pace Green Bay Quality Office

### Sample Condition Upon Receipt Form (SCUR)

Project #: **WO#: 40171655**



Client Name: Environmental Audits

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walco

Client  Pace Other: \_\_\_\_\_

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  Yes  No Seals intact:  Yes  No

Custody Seal on Samples Present:  Yes  No Seals intact:  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - NA Type of Ice: Wet Blue Dry None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: \_\_\_\_\_ /Corr: KOI

Temp Blank Present:  Yes  No Biological Tissue is Frozen:  Yes  No

Temp should be above freezing to 6°C. Biota Samples may be received at ≤ 0°C.

Person examining contents:  
 Date: 6/28/18  
 Initials: JZ

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out: <u>6/28/18 JZ</u>	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>no collect time</u> <span style="float: right;"><u>6/28/18 JZ</u></span>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3. <u>typed</u> <span style="float: right;"><u>6/28/18 JZ</u></span>
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: - VOA Samples frozen upon receipt	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	5. Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume: For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		8.
Correct Containers Used: - Pace Containers Used: - Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	9.
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC: - Includes date/time/ID/Analysis Matrix: <u>W</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>ID: TDP3 GR-5</u> <span style="float: right;"><u>6/28/18 JZ</u></span>
Trip Blank Present: Trip Blank Custody Seals Present Pace Trip Blank Lot # (if purchased):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.

**Client Notification/ Resolution:** Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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

If checked, see attached form for additional comments

Project Manager Review: Ron for Daz Date: 6/28/18

May 21, 2018

John Ruetz  
Environmental Audits Inc  
11327 W Lincoln Ave  
West Allis, WI 53227

RE: Project: TD P3 CR  
Pace Project No.: 40169299

Dear John Ruetz:

Enclosed are the analytical results for sample(s) received by the laboratory on May 17, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Ed Raymond, Environmental Audits, Inc  
Stephanie Wagner, Environmental Audits, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: TD P3 CR

Pace Project No.: 40169299

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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## SAMPLE SUMMARY

Project: TD P3 CR  
Pace Project No.: 40169299

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40169299001	CR-1	Water	05/15/18 00:00	05/17/18 09:20
40169299002	CR-2	Water	05/15/18 00:00	05/17/18 09:20
40169299003	CR-3	Water	05/15/18 00:00	05/17/18 09:20
40169299004	CR-4	Water	05/15/18 00:00	05/17/18 09:20
40169299005	TRIP BLANK	Water	05/15/18 00:00	05/17/18 09:20

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### SAMPLE ANALYTE COUNT

Project: TD P3 CR

Pace Project No.: 40169299

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40169299001	CR-1	EPA 8260	MDS	64
40169299002	CR-2	EPA 8260	MDS	64
40169299003	CR-3	EPA 8260	MDS	64
40169299004	CR-4	EPA 8260	MDS	64
40169299005	TRIP BLANK	EPA 8260	MDS	64

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### ANALYTICAL RESULTS

Project: TD P3 CR  
Pace Project No.: 40169299

**Sample: CR-1**      **Lab ID: 40169299001**      Collected: 05/15/18 00:00      Received: 05/17/18 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		05/18/18 15:37	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		05/18/18 15:37	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		05/18/18 15:37	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		05/18/18 15:37	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		05/18/18 15:37	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		05/18/18 15:37	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		05/18/18 15:37	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		05/18/18 15:37	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		05/18/18 15:37	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		05/18/18 15:37	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		05/18/18 15:37	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		05/18/18 15:37	78-87-5	L1
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		05/18/18 15:37	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		05/18/18 15:37	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		05/18/18 15:37	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		05/18/18 15:37	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		05/18/18 15:37	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		05/18/18 15:37	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		05/18/18 15:37	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		05/18/18 15:37	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		05/18/18 15:37	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		05/18/18 15:37	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		05/18/18 15:37	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		05/18/18 15:37	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		05/18/18 15:37	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		05/18/18 15:37	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	127-18-4	

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### ANALYTICAL RESULTS

Project: TD P3 CR  
Pace Project No.: 40169299

Sample: CR-1 Lab ID: 40169299001 Collected: 05/15/18 00:00 Received: 05/17/18 09:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Toluene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	108-88-3	
Trichloroethene	0.38J	ug/L	1.0	0.33	1		05/18/18 15:37	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		05/18/18 15:37	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		05/18/18 15:37	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		05/18/18 15:37	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		05/18/18 15:37	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:37	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		05/18/18 15:37	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		05/18/18 15:37	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		05/18/18 15:37	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		05/18/18 15:37	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	90	%	61-130		1		05/18/18 15:37	460-00-4	
Dibromofluoromethane (S)	120	%	67-130		1		05/18/18 15:37	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		05/18/18 15:37	2037-26-5	

Sample: CR-2 Lab ID: 40169299002 Collected: 05/15/18 00:00 Received: 05/17/18 09:20 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		05/18/18 15:59	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	71-55-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		05/18/18 15:59	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		05/18/18 15:59	79-00-5	
1,1-Dichloroethane	2.9	ug/L	1.0	0.24	1		05/18/18 15:59	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		05/18/18 15:59	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		05/18/18 15:59	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		05/18/18 15:59	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		05/18/18 15:59	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		05/18/18 15:59	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		05/18/18 15:59	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		05/18/18 15:59	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		05/18/18 15:59	78-87-5	L1
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	142-28-9	

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### ANALYTICAL RESULTS

Project: TD P3 CR

Pace Project No.: 40169299

**Sample: CR-2**      **Lab ID: 40169299002**      Collected: 05/15/18 00:00      Received: 05/17/18 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		05/18/18 15:59	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		05/18/18 15:59	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		05/18/18 15:59	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		05/18/18 15:59	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		05/18/18 15:59	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		05/18/18 15:59	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		05/18/18 15:59	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		05/18/18 15:59	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		05/18/18 15:59	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		05/18/18 15:59	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		05/18/18 15:59	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		05/18/18 15:59	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		05/18/18 15:59	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		05/18/18 15:59	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		05/18/18 15:59	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		05/18/18 15:59	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		05/18/18 15:59	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		05/18/18 15:59	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		05/18/18 15:59	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		05/18/18 15:59	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		05/18/18 15:59	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		05/18/18 15:59	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		05/18/18 15:59	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		05/18/18 15:59	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	93	%	61-130		1		05/18/18 15:59	460-00-4	
Dibromofluoromethane (S)	118	%	67-130		1		05/18/18 15:59	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		05/18/18 15:59	2037-26-5	

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### ANALYTICAL RESULTS

Project: TD P3 CR  
Pace Project No.: 40169299

**Sample: CR-3**      **Lab ID: 40169299003**      Collected: 05/15/18 00:00      Received: 05/17/18 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<181	ug/L	1000	181	1000		05/18/18 17:26	630-20-6	
1,1,1-Trichloroethane	13600	ug/L	1000	500	1000		05/18/18 17:26	71-55-6	
1,1,2,2-Tetrachloroethane	<249	ug/L	1000	249	1000		05/18/18 17:26	79-34-5	
1,1,2-Trichloroethane	<197	ug/L	1000	197	1000		05/18/18 17:26	79-00-5	
1,1-Dichloroethane	80400	ug/L	1000	242	1000		05/18/18 17:26	75-34-3	
1,1-Dichloroethene	2730	ug/L	1000	410	1000		05/18/18 17:26	75-35-4	
1,1-Dichloropropene	<441	ug/L	1000	441	1000		05/18/18 17:26	563-58-6	
1,2,3-Trichlorobenzene	<2130	ug/L	5000	2130	1000		05/18/18 17:26	87-61-6	
1,2,3-Trichloropropane	<500	ug/L	1000	500	1000		05/18/18 17:26	96-18-4	
1,2,4-Trichlorobenzene	<2210	ug/L	5000	2210	1000		05/18/18 17:26	120-82-1	
1,2,4-Trimethylbenzene	<500	ug/L	1000	500	1000		05/18/18 17:26	95-63-6	
1,2-Dibromo-3-chloropropane	<2160	ug/L	5000	2160	1000		05/18/18 17:26	96-12-8	
1,2-Dibromoethane (EDB)	<178	ug/L	1000	178	1000		05/18/18 17:26	106-93-4	
1,2-Dichlorobenzene	<500	ug/L	1000	500	1000		05/18/18 17:26	95-50-1	
1,2-Dichloroethane	<168	ug/L	1000	168	1000		05/18/18 17:26	107-06-2	
1,2-Dichloropropane	<233	ug/L	1000	233	1000		05/18/18 17:26	78-87-5	L1
1,3,5-Trimethylbenzene	<500	ug/L	1000	500	1000		05/18/18 17:26	108-67-8	
1,3-Dichlorobenzene	<500	ug/L	1000	500	1000		05/18/18 17:26	541-73-1	
1,3-Dichloropropane	<500	ug/L	1000	500	1000		05/18/18 17:26	142-28-9	
1,4-Dichlorobenzene	<500	ug/L	1000	500	1000		05/18/18 17:26	106-46-7	
2,2-Dichloropropane	<484	ug/L	1000	484	1000		05/18/18 17:26	594-20-7	
2-Chlorotoluene	<500	ug/L	1000	500	1000		05/18/18 17:26	95-49-8	
4-Chlorotoluene	<214	ug/L	1000	214	1000		05/18/18 17:26	106-43-4	
Benzene	<500	ug/L	1000	500	1000		05/18/18 17:26	71-43-2	
Bromobenzene	<230	ug/L	1000	230	1000		05/18/18 17:26	108-86-1	
Bromochloromethane	<340	ug/L	1000	340	1000		05/18/18 17:26	74-97-5	
Bromodichloromethane	<500	ug/L	1000	500	1000		05/18/18 17:26	75-27-4	
Bromoform	<500	ug/L	1000	500	1000		05/18/18 17:26	75-25-2	
Bromomethane	<2430	ug/L	5000	2430	1000		05/18/18 17:26	74-83-9	
Carbon tetrachloride	<500	ug/L	1000	500	1000		05/18/18 17:26	56-23-5	
Chlorobenzene	<500	ug/L	1000	500	1000		05/18/18 17:26	108-90-7	
Chloroethane	45400	ug/L	1000	375	1000		05/18/18 17:26	75-00-3	
Chloroform	<2500	ug/L	5000	2500	1000		05/18/18 17:26	67-66-3	
Chloromethane	<500	ug/L	1000	500	1000		05/18/18 17:26	74-87-3	
Dibromochloromethane	<500	ug/L	1000	500	1000		05/18/18 17:26	124-48-1	
Dibromomethane	<427	ug/L	1000	427	1000		05/18/18 17:26	74-95-3	
Dichlorodifluoromethane	<224	ug/L	1000	224	1000		05/18/18 17:26	75-71-8	
Diisopropyl ether	<500	ug/L	1000	500	1000		05/18/18 17:26	108-20-3	
Ethylbenzene	<500	ug/L	1000	500	1000		05/18/18 17:26	100-41-4	
Hexachloro-1,3-butadiene	<2110	ug/L	5000	2110	1000		05/18/18 17:26	87-68-3	
Isopropylbenzene (Cumene)	<143	ug/L	1000	143	1000		05/18/18 17:26	98-82-8	
Methyl-tert-butyl ether	<174	ug/L	1000	174	1000		05/18/18 17:26	1634-04-4	
Methylene Chloride	314J	ug/L	1000	233	1000		05/18/18 17:26	75-09-2	
Naphthalene	<2500	ug/L	5000	2500	1000		05/18/18 17:26	91-20-3	
Styrene	<500	ug/L	1000	500	1000		05/18/18 17:26	100-42-5	
Tetrachloroethene	<500	ug/L	1000	500	1000		05/18/18 17:26	127-18-4	

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### ANALYTICAL RESULTS

Project: TD P3 CR  
Pace Project No.: 40169299

**Sample: CR-3**      **Lab ID: 40169299003**      Collected: 05/15/18 00:00      Received: 05/17/18 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Toluene	<500	ug/L	1000	500	1000		05/18/18 17:26	108-88-3	
Trichloroethene	<331	ug/L	1000	331	1000		05/18/18 17:26	79-01-6	
Trichlorofluoromethane	<185	ug/L	1000	185	1000		05/18/18 17:26	75-69-4	
Vinyl chloride	4030	ug/L	1000	176	1000		05/18/18 17:26	75-01-4	
cis-1,2-Dichloroethene	<256	ug/L	1000	256	1000		05/18/18 17:26	156-59-2	
cis-1,3-Dichloropropene	<500	ug/L	1000	500	1000		05/18/18 17:26	10061-01-5	
m&p-Xylene	<1000	ug/L	2000	1000	1000		05/18/18 17:26	179601-23-1	
n-Butylbenzene	<500	ug/L	1000	500	1000		05/18/18 17:26	104-51-8	
n-Propylbenzene	<500	ug/L	1000	500	1000		05/18/18 17:26	103-65-1	
o-Xylene	<500	ug/L	1000	500	1000		05/18/18 17:26	95-47-6	
p-Isopropyltoluene	<500	ug/L	1000	500	1000		05/18/18 17:26	99-87-6	
sec-Butylbenzene	<2190	ug/L	5000	2190	1000		05/18/18 17:26	135-98-8	
tert-Butylbenzene	<180	ug/L	1000	180	1000		05/18/18 17:26	98-06-6	
trans-1,2-Dichloroethene	<257	ug/L	1000	257	1000		05/18/18 17:26	156-60-5	
trans-1,3-Dichloropropene	<230	ug/L	1000	230	1000		05/18/18 17:26	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	87	%	61-130		1000		05/18/18 17:26	460-00-4	
Dibromofluoromethane (S)	121	%	67-130		1000		05/18/18 17:26	1868-53-7	
Toluene-d8 (S)	98	%	70-130		1000		05/18/18 17:26	2037-26-5	

**Sample: CR-4**      **Lab ID: 40169299004**      Collected: 05/15/18 00:00      Received: 05/17/18 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		05/18/18 16:21	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	71-55-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		05/18/18 16:21	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		05/18/18 16:21	79-00-5	
1,1-Dichloroethane	0.84J	ug/L	1.0	0.24	1		05/18/18 16:21	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		05/18/18 16:21	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		05/18/18 16:21	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		05/18/18 16:21	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		05/18/18 16:21	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		05/18/18 16:21	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		05/18/18 16:21	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		05/18/18 16:21	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		05/18/18 16:21	78-87-5	L1
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	142-28-9	

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## ANALYTICAL RESULTS

Project: TD P3 CR

Pace Project No.: 40169299

**Sample: CR-4**      **Lab ID: 40169299004**      Collected: 05/15/18 00:00      Received: 05/17/18 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		05/18/18 16:21	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		05/18/18 16:21	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		05/18/18 16:21	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		05/18/18 16:21	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		05/18/18 16:21	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		05/18/18 16:21	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		05/18/18 16:21	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		05/18/18 16:21	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		05/18/18 16:21	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		05/18/18 16:21	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		05/18/18 16:21	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		05/18/18 16:21	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		05/18/18 16:21	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		05/18/18 16:21	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		05/18/18 16:21	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		05/18/18 16:21	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		05/18/18 16:21	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		05/18/18 16:21	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		05/18/18 16:21	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		05/18/18 16:21	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		05/18/18 16:21	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		05/18/18 16:21	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		05/18/18 16:21	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		05/18/18 16:21	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	90	%	61-130		1		05/18/18 16:21	460-00-4	
Dibromofluoromethane (S)	118	%	67-130		1		05/18/18 16:21	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		05/18/18 16:21	2037-26-5	

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### ANALYTICAL RESULTS

Project: TD P3 CR  
Pace Project No.: 40169299

**Sample: TRIP BLANK**      **Lab ID: 40169299005**      Collected: 05/15/18 00:00      Received: 05/17/18 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		05/18/18 12:43	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		05/18/18 12:43	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		05/18/18 12:43	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		05/18/18 12:43	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		05/18/18 12:43	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		05/18/18 12:43	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		05/18/18 12:43	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		05/18/18 12:43	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		05/18/18 12:43	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		05/18/18 12:43	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		05/18/18 12:43	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		05/18/18 12:43	78-87-5	L1
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		05/18/18 12:43	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		05/18/18 12:43	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		05/18/18 12:43	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		05/18/18 12:43	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		05/18/18 12:43	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		05/18/18 12:43	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		05/18/18 12:43	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		05/18/18 12:43	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		05/18/18 12:43	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		05/18/18 12:43	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		05/18/18 12:43	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		05/18/18 12:43	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		05/18/18 12:43	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		05/18/18 12:43	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	127-18-4	

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### ANALYTICAL RESULTS

Project: TD P3 CR

Pace Project No.: 40169299

**Sample: TRIP BLANK**      **Lab ID: 40169299005**      Collected: 05/15/18 00:00      Received: 05/17/18 09:20      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Toluene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		05/18/18 12:43	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		05/18/18 12:43	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		05/18/18 12:43	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		05/18/18 12:43	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		05/18/18 12:43	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		05/18/18 12:43	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		05/18/18 12:43	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		05/18/18 12:43	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		05/18/18 12:43	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		05/18/18 12:43	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	61-130		1		05/18/18 12:43	460-00-4	
Dibromofluoromethane (S)	117	%	67-130		1		05/18/18 12:43	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		05/18/18 12:43	2037-26-5	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: TD P3 CR  
Pace Project No.: 40169299

QC Batch: 289266 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 40169299001, 40169299002, 40169299003, 40169299004, 40169299005

METHOD BLANK: 1692585 Matrix: Water  
Associated Lab Samples: 40169299001, 40169299002, 40169299003, 40169299004, 40169299005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	05/18/18 09:06	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	05/18/18 09:06	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	05/18/18 09:06	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	05/18/18 09:06	
1,1-Dichloroethane	ug/L	<0.24	1.0	05/18/18 09:06	
1,1-Dichloroethene	ug/L	<0.41	1.0	05/18/18 09:06	
1,1-Dichloropropene	ug/L	<0.44	1.0	05/18/18 09:06	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	05/18/18 09:06	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	05/18/18 09:06	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	05/18/18 09:06	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	05/18/18 09:06	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	05/18/18 09:06	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	05/18/18 09:06	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	05/18/18 09:06	
1,2-Dichloroethane	ug/L	<0.17	1.0	05/18/18 09:06	
1,2-Dichloropropane	ug/L	<0.23	1.0	05/18/18 09:06	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	05/18/18 09:06	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	05/18/18 09:06	
1,3-Dichloropropane	ug/L	<0.50	1.0	05/18/18 09:06	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	05/18/18 09:06	
2,2-Dichloropropane	ug/L	<0.48	1.0	05/18/18 09:06	
2-Chlorotoluene	ug/L	<0.50	1.0	05/18/18 09:06	
4-Chlorotoluene	ug/L	<0.21	1.0	05/18/18 09:06	
Benzene	ug/L	<0.50	1.0	05/18/18 09:06	
Bromobenzene	ug/L	<0.23	1.0	05/18/18 09:06	
Bromochloromethane	ug/L	<0.34	1.0	05/18/18 09:06	
Bromodichloromethane	ug/L	<0.50	1.0	05/18/18 09:06	
Bromoform	ug/L	<0.50	1.0	05/18/18 09:06	
Bromomethane	ug/L	<2.4	5.0	05/18/18 09:06	
Carbon tetrachloride	ug/L	<0.50	1.0	05/18/18 09:06	
Chlorobenzene	ug/L	<0.50	1.0	05/18/18 09:06	
Chloroethane	ug/L	<0.37	1.0	05/18/18 09:06	
Chloroform	ug/L	<2.5	5.0	05/18/18 09:06	
Chloromethane	ug/L	<0.50	1.0	05/18/18 09:06	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	05/18/18 09:06	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	05/18/18 09:06	
Dibromochloromethane	ug/L	<0.50	1.0	05/18/18 09:06	
Dibromomethane	ug/L	<0.43	1.0	05/18/18 09:06	
Dichlorodifluoromethane	ug/L	<0.22	1.0	05/18/18 09:06	
Diisopropyl ether	ug/L	<0.50	1.0	05/18/18 09:06	
Ethylbenzene	ug/L	<0.50	1.0	05/18/18 09:06	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: TD P3 CR  
Pace Project No.: 40169299

METHOD BLANK: 1692585

Matrix: Water

Associated Lab Samples: 40169299001, 40169299002, 40169299003, 40169299004, 40169299005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	05/18/18 09:06	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	05/18/18 09:06	
m&p-Xylene	ug/L	<1.0	2.0	05/18/18 09:06	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	05/18/18 09:06	
Methylene Chloride	ug/L	<0.23	1.0	05/18/18 09:06	
n-Butylbenzene	ug/L	<0.50	1.0	05/18/18 09:06	
n-Propylbenzene	ug/L	<0.50	1.0	05/18/18 09:06	
Naphthalene	ug/L	<2.5	5.0	05/18/18 09:06	
o-Xylene	ug/L	<0.50	1.0	05/18/18 09:06	
p-Isopropyltoluene	ug/L	<0.50	1.0	05/18/18 09:06	
sec-Butylbenzene	ug/L	<2.2	5.0	05/18/18 09:06	
Styrene	ug/L	<0.50	1.0	05/18/18 09:06	
tert-Butylbenzene	ug/L	<0.18	1.0	05/18/18 09:06	
Tetrachloroethene	ug/L	<0.50	1.0	05/18/18 09:06	
Toluene	ug/L	<0.50	1.0	05/18/18 09:06	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	05/18/18 09:06	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	05/18/18 09:06	
Trichloroethene	ug/L	<0.33	1.0	05/18/18 09:06	
Trichlorofluoromethane	ug/L	<0.18	1.0	05/18/18 09:06	
Vinyl chloride	ug/L	<0.18	1.0	05/18/18 09:06	
4-Bromofluorobenzene (S)	%	92	61-130	05/18/18 09:06	
Dibromofluoromethane (S)	%	113	67-130	05/18/18 09:06	
Toluene-d8 (S)	%	99	70-130	05/18/18 09:06	

LABORATORY CONTROL SAMPLE: 1692586

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	58.0	116	70-130	
1,1,1,2-Tetrachloroethane	ug/L	50	53.3	107	70-130	
1,1,2-Trichloroethane	ug/L	50	52.8	106	70-130	
1,1-Dichloroethane	ug/L	50	59.1	118	71-132	
1,1-Dichloroethene	ug/L	50	57.0	114	75-130	
1,2,4-Trichlorobenzene	ug/L	50	45.6	91	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	51.7	103	63-123	
1,2-Dibromoethane (EDB)	ug/L	50	52.1	104	70-130	
1,2-Dichlorobenzene	ug/L	50	50.8	102	70-130	
1,2-Dichloroethane	ug/L	50	62.8	126	70-131	
1,2-Dichloropropane	ug/L	50	61.8	124	80-120 L1	
1,3-Dichlorobenzene	ug/L	50	50.7	101	70-130	
1,4-Dichlorobenzene	ug/L	50	53.8	108	70-130	
Benzene	ug/L	50	57.8	116	73-145	
Bromodichloromethane	ug/L	50	59.9	120	70-130	
Bromoform	ug/L	50	50.2	100	67-130	
Bromomethane	ug/L	50	37.4	75	26-128	

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### QUALITY CONTROL DATA

Project: TD P3 CR  
Pace Project No.: 40169299

LABORATORY CONTROL SAMPLE: 1692586

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	59.6	119	70-133	
Chlorobenzene	ug/L	50	53.2	106	70-130	
Chloroethane	ug/L	50	47.6	95	58-120	
Chloroform	ug/L	50	54.7	109	80-121	
Chloromethane	ug/L	50	35.3	71	40-127	
cis-1,2-Dichloroethene	ug/L	50	43.3	87	70-130	
cis-1,3-Dichloropropene	ug/L	50	52.1	104	70-130	
Dibromochloromethane	ug/L	50	54.2	108	70-130	
Dichlorodifluoromethane	ug/L	50	18.0	36	20-135	
Ethylbenzene	ug/L	50	56.4	113	87-129	
Isopropylbenzene (Cumene)	ug/L	50	56.5	113	70-130	
m&p-Xylene	ug/L	100	113	113	70-130	
Methyl-tert-butyl ether	ug/L	50	54.0	108	66-143	
Methylene Chloride	ug/L	50	54.6	109	70-130	
o-Xylene	ug/L	50	56.5	113	70-130	
Styrene	ug/L	50	59.1	118	70-130	
Tetrachloroethene	ug/L	50	47.7	95	70-130	
Toluene	ug/L	50	53.6	107	82-130	
trans-1,2-Dichloroethene	ug/L	50	56.4	113	75-132	
trans-1,3-Dichloropropene	ug/L	50	49.4	99	70-130	
Trichloroethene	ug/L	50	55.7	111	70-130	
Trichlorofluoromethane	ug/L	50	52.3	105	76-133	
Vinyl chloride	ug/L	50	38.4	77	57-136	
4-Bromofluorobenzene (S)	%			104	61-130	
Dibromofluoromethane (S)	%			106	67-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1692687 1692688

Parameter	Units	40169311001		MSD		MSD		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
1,1,1-Trichloroethane	ug/L	<0.50	50	50	57.9	58.7	116	117	70-134	1	20		
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	54.7	56.2	109	112	70-130	3	20		
1,1,2-Trichloroethane	ug/L	<0.20	50	50	55.3	54.8	111	110	70-130	1	20		
1,1-Dichloroethane	ug/L	<0.24	50	50	58.4	55.4	117	111	71-133	5	20		
1,1-Dichloroethene	ug/L	<0.41	50	50	53.5	51.9	107	104	75-136	3	20		
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	47.7	48.0	95	96	70-130	1	20		
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	54.4	53.8	109	108	63-123	1	20		
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	53.4	53.8	107	108	70-130	1	20		
1,2-Dichlorobenzene	ug/L	<0.50	50	50	50.7	52.1	101	104	70-130	3	20		
1,2-Dichloroethane	ug/L	<0.17	50	50	61.3	60.1	123	120	70-131	2	20		
1,2-Dichloropropane	ug/L	<0.23	50	50	63.9	62.3	128	125	80-120	3	20	M0	
1,3-Dichlorobenzene	ug/L	<0.50	50	50	50.2	51.3	100	103	70-130	2	20		
1,4-Dichlorobenzene	ug/L	<0.50	50	50	53.4	55.1	107	110	70-130	3	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: TD P3 CR  
Pace Project No.: 40169299

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1692687		1692688		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		40169311001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Benzene	ug/L	<0.50	50	50	58.5	58.0	117	116	73-145	1	20	
Bromodichloromethane	ug/L	<0.50	50	50	61.3	59.5	123	119	70-130	3	20	
Bromoform	ug/L	<0.50	50	50	51.1	51.7	102	103	67-130	1	20	
Bromomethane	ug/L	<2.4	50	50	41.3	39.4	83	79	26-129	5	20	
Carbon tetrachloride	ug/L	<0.50	50	50	60.2	60.9	120	122	70-134	1	20	
Chlorobenzene	ug/L	<0.50	50	50	54.8	54.8	110	110	70-130	0	20	
Chloroethane	ug/L	<0.37	50	50	47.1	44.3	94	89	58-120	6	20	
Chloroform	ug/L	<2.5	50	50	56.7	58.0	113	116	80-121	2	20	
Chloromethane	ug/L	<0.50	50	50	36.7	32.9	73	66	40-128	11	20	
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	44.4	52.9	89	106	70-130	18	20	
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	53.9	50.9	108	102	70-130	6	20	
Dibromochloromethane	ug/L	<0.50	50	50	55.1	56.2	110	112	70-130	2	20	
Dichlorodifluoromethane	ug/L	<0.22	50	50	17.4	16.6	35	33	20-146	5	20	
Ethylbenzene	ug/L	<0.50	50	50	57.9	58.7	116	117	87-129	1	20	
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	57.4	57.7	115	115	70-130	0	20	
m&p-Xylene	ug/L	<1.0	100	100	116	115	116	115	70-130	1	20	
Methyl-tert-butyl ether	ug/L	<0.17	50	50	55.1	53.0	110	106	66-143	4	20	
Methylene Chloride	ug/L	<0.23	50	50	52.3	50.3	105	101	70-130	4	20	
o-Xylene	ug/L	<0.50	50	50	56.9	58.1	114	116	70-130	2	20	
Styrene	ug/L	<0.50	50	50	58.9	59.5	118	119	70-130	1	20	
Tetrachloroethene	ug/L	<0.50	50	50	49.2	48.8	98	98	70-130	1	20	
Toluene	ug/L	<0.50	50	50	54.7	54.5	109	109	82-131	0	20	
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	54.4	52.5	109	105	75-135	4	20	
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	50.5	49.4	101	99	70-130	2	20	
Trichloroethene	ug/L	<0.33	50	50	58.3	55.6	117	111	70-130	5	20	
Trichlorofluoromethane	ug/L	<0.18	50	50	52.4	50.4	105	101	76-150	4	20	
Vinyl chloride	ug/L	<0.18	50	50	37.3	36.0	75	72	56-143	4	20	
4-Bromofluorobenzene (S)	%						103	104	61-130			
Dibromofluoromethane (S)	%						106	108	67-130			
Toluene-d8 (S)	%						98	98	70-130			

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: TD P3 CR

Pace Project No.: 40169299

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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 LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

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 at or above the adjusted LOD.

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.

### ANALYTE QUALIFIERS

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TD P3 CR

Pace Project No.: 40169299

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40169299001	CR-1	EPA 8260	289266		
40169299002	CR-2	EPA 8260	289266		
40169299003	CR-3	EPA 8260	289266		
40169299004	CR-4	EPA 8260	289266		
40169299005	TRIP BLANK	EPA 8260	289266		

### REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY / Analytical Request Document

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

46169299

**Section A** Required Client Information: **Section B** Required Project Information: **Section C** Invoice Information:

Company: Environmental Audits Inc. Report To: jruezt@yahoo.com. Attention: John Ruetz  
 Address: 11327 W Lincoln Avenue Copy To: eerill@wi.rr.com; john@environmentalaudits.net  
 West Allis WI 53051 Purchase Order No.: Verbal Address: 11327 W Lincoln Avenue  
 Email To: john@environmentalaudits.net Project Name: TD P3 CR Pace Quote  
 Phone: 414-226-5563 Fax: Project Number: Pace Project Manager:  
 Requested Due Date/TAT: Project Number: Pace Profile #:

Page: \_\_\_\_\_ of \_\_\_\_\_ Page 19 of 21

**REGULATORY AGENCY**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER  
 Site Location STATE: WI

ITEM #	Section D Required Client Information	Valid Matrix Codes CODE DRINKING WATER DW WASTE WATER WW WASTE WATER PRODUCT P SOIL/SOLID SL OIL OL WIFE WP AIR AR OTHER OT TISSUE TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
					COMPOSITE START	COMPOSITE END/GRAB			DATE	TIME	DATE	TIME	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl				
1	CR-1		GW	G	5/15/18			3										001	
2	CR-2		GW	G	5/15/18			3										002	
3	CR-3		GW	G	5/15/18			3										003	
4	CR-4		GW	G	5/15/18			3										004	
5																		005	
6																			
7																			
8																			
9																			
10																			
11																			
12																			

**ADDITIONAL COMMENTS** Relinquished by / Affiliation: Stephanie Wagner DATE: 10/17/17 TIME: 15:50  
 ACCEPTED BY / AFFILIATION: Mary Farnham DATE: 5/15/18 TIME: 15:50  
 CR-5 was not sampled. Well cap was on upside down and could not be removed.

**SAMPLER NAME AND SIGNATURE**  
 PRINT Name of SAMPLER: Stephanie Wagner DATE Signed (MM/DD/YY): 5/15/18  
 SIGNATURE of SAMPLER: *[Signature]*

**SAMPLE CONDITIONS**  
 Temp in °C \_\_\_\_\_ Received on Ice (Y/N) Y Custody Sealed Cooler (Y/N) Y Samples Intact (Y/N) Y

*In shipment to VOC Lab added to VOC 5-17-18*

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020/rev.08, 12-Oct-2007



Client Name: Environmental Audit Project Sample Preservation Receipt Form  
 Lab Lot# of pH paper:  Yes  No  N/A  
 Lab Std #ID of preservation (if pH adjusted): 40169299

All containers needing preservation have been checked and noted below:  Yes  No  N/A  
 Initial when completed: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Page Lab #	AG1U AG1H AG4S AG4U AG5U AG2S BG3U	BP1U BP2N BP2Z BP3U BP3C BP3N BP3S	DG9A DG9T VG9U VG9H VG9M VG9D	JGFU WGFU WPFU	SP5T ZPLC GN	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001												2.5 / 5 / 10
002												2.5 / 5 / 10
003												2.5 / 5 / 10
004												2.5 / 5 / 10
005												2.5 / 5 / 10
006												2.5 / 5 / 10
007												2.5 / 5 / 10
008												2.5 / 5 / 10
009												2.5 / 5 / 10
010												2.5 / 5 / 10
011												2.5 / 5 / 10
012												2.5 / 5 / 10
013												2.5 / 5 / 10
014												2.5 / 5 / 10
015												2.5 / 5 / 10
016												2.5 / 5 / 10
017												2.5 / 5 / 10
018												2.5 / 5 / 10
019												2.5 / 5 / 10
020												2.5 / 5 / 10

Exceptions to preservation check:  VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: \_\_\_\_\_  
 Headspace in VOA Vials (<6mm):  Yes  No  N/A \*If yes look in headspace column

AG1U	BP1U	DG9A	JGFU	SP5T
1 liter amber glass	1 liter plastic unpres	40 ml amber ascorbic	4 oz amber jar unpres	120 mL plastic Na Thiosulfate
AG1H	BP2N	DG9T	WGFU	ZPLC
1 liter amber glass HCL	500 mL plastic HNO3	40 ml amber Na Thio	4 oz clear jar unpres	ziploc bag
AG4S	BP2Z	VG9U	WPFU	GN:
125 mL amber glass H2SO4	500 mL plastic NaOH, Znact	40 mL clear vial unpres	4 oz plastic jar unpres	
AG4U	BP3U	VG9H		
120 mL amber glass unpres	250 mL plastic unpres	40 mL clear vial HCL		
AG5U	BP3C	VG9M		
100 mL amber glass unpres	250 mL plastic NaOH	40 mL clear vial MeOH		
AG2S	BP3N	VG9D		
500 mL amber glass H2SO4	250 mL plastic HNO3	40 mL clear vial DI		
BG3U	BP3S			
250 mL clear glass unpres	250 mL plastic H2SO4			

**Sample Condition Upon Receipt Form (SCUR)**

Client Name:

*Environmental Audits*

Project #:

**WO#: 40169299**



40169299

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walto  
 Client  Pace Other: \_\_\_\_\_

Tracking #: \_\_\_\_\_

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

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - N/A Type of Ice:  Wet  Blue  Dry  None

Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROI /Corr: \_\_\_\_\_

Temp Blank Present:  yes  no

Biological Tissue is Frozen:  yes  no

Person examining contents:

Date: 5-17-18

Initials: [Signature]

Temp should be above freezing to 6°C.  
Biota Samples may be received at ≤ 0°C.

Chain of Custody Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <i>No collect times</i>
Chain of Custody Relinquished: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt <input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume: <input type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>	
Trip Blank Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>394</u>	

Client Notification/ Resolution:

If checked, see attached form for additional comments

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

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

Project Manager Review: AR for DM

Date: 5/17/18

March 22, 2018

John Ruetz  
Environmental Audits Inc  
11327 W Lincoln Ave  
West Allis, WI 53227

RE: Project: TD P3 GW  
Pace Project No.: 40166084

Dear John Ruetz:

Enclosed are the analytical results for sample(s) received by the laboratory on March 17, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Ed Raymond, Environmental Audits, Inc  
Stephanie Wagner, Environmental Audits, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: TD P3 GW

Pace Project No.: 40166084

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: TD P3 GW

Pace Project No.: 40166084

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
40166084001	CR-1	Water	03/14/18 00:00	03/17/18 08:35
40166084002	CR-3	Water	03/14/18 00:00	03/17/18 08:35

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### SAMPLE ANALYTE COUNT

Project: TD P3 GW

Pace Project No.: 40166084

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
40166084001	CR-1	EPA 8260	HNW	64
40166084002	CR-3	EPA 8260	HNW	64

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: TD P3 GW

Pace Project No.: 40166084

**Sample: CR-1**      **Lab ID: 40166084001**      Collected: 03/14/18 00:00      Received: 03/17/18 08:35      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/21/18 14:42	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/21/18 14:42	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/21/18 14:42	79-00-5	
1,1-Dichloroethane	0.32J	ug/L	1.0	0.24	1		03/21/18 14:42	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/21/18 14:42	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/21/18 14:42	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/21/18 14:42	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/21/18 14:42	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/21/18 14:42	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/21/18 14:42	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/21/18 14:42	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/21/18 14:42	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/21/18 14:42	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/21/18 14:42	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/21/18 14:42	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/21/18 14:42	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/21/18 14:42	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/21/18 14:42	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		03/21/18 14:42	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/21/18 14:42	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/21/18 14:42	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/21/18 14:42	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/21/18 14:42	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/21/18 14:42	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/21/18 14:42	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/21/18 14:42	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	127-18-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: TD P3 GW  
Pace Project No.: 40166084

**Sample: CR-1**      **Lab ID: 40166084001**      Collected: 03/14/18 00:00      Received: 03/17/18 08:35      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Toluene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	108-88-3	
Trichloroethene	0.56J	ug/L	1.0	0.33	1		03/21/18 14:42	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/21/18 14:42	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/21/18 14:42	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/21/18 14:42	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/21/18 14:42	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/21/18 14:42	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/21/18 14:42	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/21/18 14:42	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/21/18 14:42	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/21/18 14:42	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	95	%	61-130		1		03/21/18 14:42	460-00-4	
Dibromofluoromethane (S)	92	%	67-130		1		03/21/18 14:42	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		03/21/18 14:42	2037-26-5	

**Sample: CR-3**      **Lab ID: 40166084002**      Collected: 03/14/18 00:00      Received: 03/17/18 08:35      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<181	ug/L	1000	181	1000		03/21/18 10:19	630-20-6	
1,1,1-Trichloroethane	18400	ug/L	1000	500	1000		03/21/18 10:19	71-55-6	
1,1,1,2,2-Tetrachloroethane	<249	ug/L	1000	249	1000		03/21/18 10:19	79-34-5	
1,1,2-Trichloroethane	<197	ug/L	1000	197	1000		03/21/18 10:19	79-00-5	
1,1-Dichloroethane	60800	ug/L	1000	242	1000		03/21/18 10:19	75-34-3	
1,1-Dichloroethene	2360	ug/L	1000	410	1000		03/21/18 10:19	75-35-4	
1,1-Dichloropropene	<441	ug/L	1000	441	1000		03/21/18 10:19	563-58-6	
1,2,3-Trichlorobenzene	<2130	ug/L	5000	2130	1000		03/21/18 10:19	87-61-6	
1,2,3-Trichloropropane	<500	ug/L	1000	500	1000		03/21/18 10:19	96-18-4	
1,2,4-Trichlorobenzene	<2210	ug/L	5000	2210	1000		03/21/18 10:19	120-82-1	
1,2,4-Trimethylbenzene	<500	ug/L	1000	500	1000		03/21/18 10:19	95-63-6	
1,2-Dibromo-3-chloropropane	<2160	ug/L	5000	2160	1000		03/21/18 10:19	96-12-8	
1,2-Dibromoethane (EDB)	<178	ug/L	1000	178	1000		03/21/18 10:19	106-93-4	
1,2-Dichlorobenzene	<500	ug/L	1000	500	1000		03/21/18 10:19	95-50-1	
1,2-Dichloroethane	<168	ug/L	1000	168	1000		03/21/18 10:19	107-06-2	
1,2-Dichloropropane	<233	ug/L	1000	233	1000		03/21/18 10:19	78-87-5	
1,3,5-Trimethylbenzene	<500	ug/L	1000	500	1000		03/21/18 10:19	108-67-8	
1,3-Dichlorobenzene	<500	ug/L	1000	500	1000		03/21/18 10:19	541-73-1	
1,3-Dichloropropane	<500	ug/L	1000	500	1000		03/21/18 10:19	142-28-9	

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### ANALYTICAL RESULTS

Project: TD P3 GW  
Pace Project No.: 40166084

**Sample: CR-3**      **Lab ID: 40166084002**      Collected: 03/14/18 00:00      Received: 03/17/18 08:35      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,4-Dichlorobenzene	<500	ug/L	1000	500	1000		03/21/18 10:19	106-46-7	
2,2-Dichloropropane	<484	ug/L	1000	484	1000		03/21/18 10:19	594-20-7	
2-Chlorotoluene	<500	ug/L	1000	500	1000		03/21/18 10:19	95-49-8	
4-Chlorotoluene	<214	ug/L	1000	214	1000		03/21/18 10:19	106-43-4	
Benzene	<500	ug/L	1000	500	1000		03/21/18 10:19	71-43-2	
Bromobenzene	<230	ug/L	1000	230	1000		03/21/18 10:19	108-86-1	
Bromochloromethane	<340	ug/L	1000	340	1000		03/21/18 10:19	74-97-5	
Bromodichloromethane	<500	ug/L	1000	500	1000		03/21/18 10:19	75-27-4	
Bromoform	<500	ug/L	1000	500	1000		03/21/18 10:19	75-25-2	
Bromomethane	<2430	ug/L	5000	2430	1000		03/21/18 10:19	74-83-9	
Carbon tetrachloride	<500	ug/L	1000	500	1000		03/21/18 10:19	56-23-5	
Chlorobenzene	<500	ug/L	1000	500	1000		03/21/18 10:19	108-90-7	
Chloroethane	26000	ug/L	1000	375	1000		03/21/18 10:19	75-00-3	
Chloroform	<2500	ug/L	5000	2500	1000		03/21/18 10:19	67-66-3	
Chloromethane	<500	ug/L	1000	500	1000		03/21/18 10:19	74-87-3	
Dibromochloromethane	<500	ug/L	1000	500	1000		03/21/18 10:19	124-48-1	
Dibromomethane	<427	ug/L	1000	427	1000		03/21/18 10:19	74-95-3	
Dichlorodifluoromethane	<224	ug/L	1000	224	1000		03/21/18 10:19	75-71-8	
Diisopropyl ether	<500	ug/L	1000	500	1000		03/21/18 10:19	108-20-3	
Ethylbenzene	<500	ug/L	1000	500	1000		03/21/18 10:19	100-41-4	
Hexachloro-1,3-butadiene	<2110	ug/L	5000	2110	1000		03/21/18 10:19	87-68-3	
Isopropylbenzene (Cumene)	<143	ug/L	1000	143	1000		03/21/18 10:19	98-82-8	
Methyl-tert-butyl ether	<174	ug/L	1000	174	1000		03/21/18 10:19	1634-04-4	
Methylene Chloride	260J	ug/L	1000	233	1000		03/21/18 10:19	75-09-2	
Naphthalene	<2500	ug/L	5000	2500	1000		03/21/18 10:19	91-20-3	
Styrene	<500	ug/L	1000	500	1000		03/21/18 10:19	100-42-5	
Tetrachloroethene	<500	ug/L	1000	500	1000		03/21/18 10:19	127-18-4	
Toluene	<500	ug/L	1000	500	1000		03/21/18 10:19	108-88-3	
Trichloroethene	<331	ug/L	1000	331	1000		03/21/18 10:19	79-01-6	
Trichlorofluoromethane	<185	ug/L	1000	185	1000		03/21/18 10:19	75-69-4	
Vinyl chloride	3810	ug/L	1000	176	1000		03/21/18 10:19	75-01-4	
cis-1,2-Dichloroethene	<256	ug/L	1000	256	1000		03/21/18 10:19	156-59-2	
cis-1,3-Dichloropropene	<500	ug/L	1000	500	1000		03/21/18 10:19	10061-01-5	
m&p-Xylene	<1000	ug/L	2000	1000	1000		03/21/18 10:19	179601-23-1	
n-Butylbenzene	<500	ug/L	1000	500	1000		03/21/18 10:19	104-51-8	
n-Propylbenzene	<500	ug/L	1000	500	1000		03/21/18 10:19	103-65-1	
o-Xylene	<500	ug/L	1000	500	1000		03/21/18 10:19	95-47-6	
p-Isopropyltoluene	<500	ug/L	1000	500	1000		03/21/18 10:19	99-87-6	
sec-Butylbenzene	<2190	ug/L	5000	2190	1000		03/21/18 10:19	135-98-8	
tert-Butylbenzene	<180	ug/L	1000	180	1000		03/21/18 10:19	98-06-6	
trans-1,2-Dichloroethene	<257	ug/L	1000	257	1000		03/21/18 10:19	156-60-5	
trans-1,3-Dichloropropene	<230	ug/L	1000	230	1000		03/21/18 10:19	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	98	%	61-130		1000		03/21/18 10:19	460-00-4	
Dibromofluoromethane (S)	93	%	67-130		1000		03/21/18 10:19	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1000		03/21/18 10:19	2037-26-5	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: TD P3 GW  
Pace Project No.: 40166084

QC Batch: 283869 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 40166084001, 40166084002

METHOD BLANK: 1661637 Matrix: Water  
Associated Lab Samples: 40166084001, 40166084002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	03/21/18 08:30	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	03/21/18 08:30	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	03/21/18 08:30	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	03/21/18 08:30	
1,1-Dichloroethane	ug/L	<0.24	1.0	03/21/18 08:30	
1,1-Dichloroethene	ug/L	<0.41	1.0	03/21/18 08:30	
1,1-Dichloropropene	ug/L	<0.44	1.0	03/21/18 08:30	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	03/21/18 08:30	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	03/21/18 08:30	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	03/21/18 08:30	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	03/21/18 08:30	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	03/21/18 08:30	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	03/21/18 08:30	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	03/21/18 08:30	
1,2-Dichloroethane	ug/L	<0.17	1.0	03/21/18 08:30	
1,2-Dichloropropane	ug/L	<0.23	1.0	03/21/18 08:30	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	03/21/18 08:30	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	03/21/18 08:30	
1,3-Dichloropropane	ug/L	<0.50	1.0	03/21/18 08:30	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	03/21/18 08:30	
2,2-Dichloropropane	ug/L	<0.48	1.0	03/21/18 08:30	
2-Chlorotoluene	ug/L	<0.50	1.0	03/21/18 08:30	
4-Chlorotoluene	ug/L	<0.21	1.0	03/21/18 08:30	
Benzene	ug/L	<0.50	1.0	03/21/18 08:30	
Bromobenzene	ug/L	<0.23	1.0	03/21/18 08:30	
Bromochloromethane	ug/L	<0.34	1.0	03/21/18 08:30	
Bromodichloromethane	ug/L	<0.50	1.0	03/21/18 08:30	
Bromoform	ug/L	<0.50	1.0	03/21/18 08:30	
Bromomethane	ug/L	<2.4	5.0	03/21/18 08:30	
Carbon tetrachloride	ug/L	<0.50	1.0	03/21/18 08:30	
Chlorobenzene	ug/L	<0.50	1.0	03/21/18 08:30	
Chloroethane	ug/L	<0.37	1.0	03/21/18 08:30	
Chloroform	ug/L	<2.5	5.0	03/21/18 08:30	
Chloromethane	ug/L	<0.50	1.0	03/21/18 08:30	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	03/21/18 08:30	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	03/21/18 08:30	
Dibromochloromethane	ug/L	<0.50	1.0	03/21/18 08:30	
Dibromomethane	ug/L	<0.43	1.0	03/21/18 08:30	
Dichlorodifluoromethane	ug/L	<0.22	1.0	03/21/18 08:30	
Diisopropyl ether	ug/L	<0.50	1.0	03/21/18 08:30	
Ethylbenzene	ug/L	<0.50	1.0	03/21/18 08:30	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: TD P3 GW  
Pace Project No.: 40166084

METHOD BLANK: 1661637 Matrix: Water  
Associated Lab Samples: 40166084001, 40166084002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	03/21/18 08:30	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	03/21/18 08:30	
m&p-Xylene	ug/L	<1.0	2.0	03/21/18 08:30	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	03/21/18 08:30	
Methylene Chloride	ug/L	<0.23	1.0	03/21/18 08:30	
n-Butylbenzene	ug/L	<0.50	1.0	03/21/18 08:30	
n-Propylbenzene	ug/L	<0.50	1.0	03/21/18 08:30	
Naphthalene	ug/L	<2.5	5.0	03/21/18 08:30	
o-Xylene	ug/L	<0.50	1.0	03/21/18 08:30	
p-Isopropyltoluene	ug/L	<0.50	1.0	03/21/18 08:30	
sec-Butylbenzene	ug/L	<2.2	5.0	03/21/18 08:30	
Styrene	ug/L	<0.50	1.0	03/21/18 08:30	
tert-Butylbenzene	ug/L	<0.18	1.0	03/21/18 08:30	
Tetrachloroethene	ug/L	<0.50	1.0	03/21/18 08:30	
Toluene	ug/L	<0.50	1.0	03/21/18 08:30	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	03/21/18 08:30	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	03/21/18 08:30	
Trichloroethene	ug/L	<0.33	1.0	03/21/18 08:30	
Trichlorofluoromethane	ug/L	<0.18	1.0	03/21/18 08:30	
Vinyl chloride	ug/L	<0.18	1.0	03/21/18 08:30	
4-Bromofluorobenzene (S)	%	97	61-130	03/21/18 08:30	
Dibromofluoromethane (S)	%	97	67-130	03/21/18 08:30	
Toluene-d8 (S)	%	100	70-130	03/21/18 08:30	

LABORATORY CONTROL SAMPLE: 1661638

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	49.4	99	70-130	
1,1,1,2-Tetrachloroethane	ug/L	50	51.4	103	70-130	
1,1,2-Trichloroethane	ug/L	50	51.2	102	70-130	
1,1-Dichloroethane	ug/L	50	53.9	108	71-132	
1,1-Dichloroethene	ug/L	50	60.4	121	75-130	
1,2,4-Trichlorobenzene	ug/L	50	51.6	103	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	51.4	103	63-123	
1,2-Dibromoethane (EDB)	ug/L	50	50.9	102	70-130	
1,2-Dichlorobenzene	ug/L	50	50.8	102	70-130	
1,2-Dichloroethane	ug/L	50	51.2	102	70-131	
1,2-Dichloropropane	ug/L	50	46.7	93	80-120	
1,3-Dichlorobenzene	ug/L	50	50.6	101	70-130	
1,4-Dichlorobenzene	ug/L	50	48.9	98	70-130	
Benzene	ug/L	50	50.0	100	73-145	
Bromodichloromethane	ug/L	50	49.4	99	70-130	
Bromoform	ug/L	50	47.1	94	67-130	
Bromomethane	ug/L	50	42.2	84	26-128	

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### QUALITY CONTROL DATA

Project: TD P3 GW

Pace Project No.: 40166084

LABORATORY CONTROL SAMPLE: 1661638

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	47.6	95	70-133	
Chlorobenzene	ug/L	50	50.2	100	70-130	
Chloroethane	ug/L	50	54.0	108	58-120	
Chloroform	ug/L	50	47.9	96	80-121	
Chloromethane	ug/L	50	52.7	105	40-127	
cis-1,2-Dichloroethene	ug/L	50	49.0	98	70-130	
cis-1,3-Dichloropropene	ug/L	50	45.7	91	70-130	
Dibromochloromethane	ug/L	50	47.5	95	70-130	
Dichlorodifluoromethane	ug/L	50	44.0	88	20-135	
Ethylbenzene	ug/L	50	52.4	105	87-129	
Isopropylbenzene (Cumene)	ug/L	50	53.1	106	70-130	
m&p-Xylene	ug/L	100	104	104	70-130	
Methyl-tert-butyl ether	ug/L	50	55.6	111	66-143	
Methylene Chloride	ug/L	50	54.3	109	70-130	
o-Xylene	ug/L	50	52.1	104	70-130	
Styrene	ug/L	50	54.1	108	70-130	
Tetrachloroethene	ug/L	50	51.0	102	70-130	
Toluene	ug/L	50	50.4	101	82-130	
trans-1,2-Dichloroethene	ug/L	50	56.0	112	75-132	
trans-1,3-Dichloropropene	ug/L	50	47.0	94	70-130	
Trichloroethene	ug/L	50	50.9	102	70-130	
Trichlorofluoromethane	ug/L	50	57.1	114	76-133	
Vinyl chloride	ug/L	50	58.1	116	57-136	
4-Bromofluorobenzene (S)	%			100	61-130	
Dibromofluoromethane (S)	%			98	67-130	
Toluene-d8 (S)	%			100	70-130	

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## QUALIFIERS

Project: TD P3 GW

Pace Project No.: 40166084

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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 LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

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 at or above the adjusted LOD.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TD P3 GW

Pace Project No.: 40166084

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Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40166084001	CR-1	EPA 8260	283869		
40166084002	CR-3	EPA 8260	283869		

### REPORT OF LABORATORY ANALYSIS

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**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

4/16/08

Page: \_\_\_\_\_ of \_\_\_\_\_ Page 13 of 15

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company:	Environmental Audits Inc.	Report To:	jruetz@yahoo.com;	Attention:	John Ruetz
Address:	11327 W Lincoln Avenue	Copy To:	eejiii@w.rr.com; john@environmentalaudits.net	Company Name:	Environmental Audits Inc.
	West Allis WI 53051	Purchase Order No.:	Verbal	Address:	11327 W Lincoln Avenue
Email To:	john@environmentalaudits.net	Project Name:	TD P3 GW	Pace Quote Reference:	
Phone:	414-226-5663	Project Number:		Pace Project Manager:	
Requested Due Date/TAT:				Pace Profile #:	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
					COMPOSITE START	COMPOSITE END/GRAB	DATE					TIME	DATE		
1	001	CR-1	GW	G	3/14/18				3						
2	002	CR-3	GW	G	3/14/18				3	X					
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS	
		Stephanie Wagner		3/14/18		Mary of Ann Miller / B330		3/14/18		Temp in °C	
		Miss Janis C. Voght		3/14/18	1350	B330		3/14/18		Received on Ice (Y/N)	
										Custody Sealed Cooler (Y/N)	
										Samples Intact (Y/N)	

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: Stephanie Wagner

SIGNATURE of SAMPLER: *[Signature]*

DATE Signed (MM/DD/YY): 3/14/18

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.08, 12-Oct-2007

Client Name: Erin Anderson

Sample Preservation Receipt Form  
Project # 9066084

Pace Analytical Services, LLC  
1241 Bellevue Street, Suite 9  
Green Bay, WI 53002

All containers needing preservation have been checked and noted below:  Yes  No  N/A Lab Std #/ID of preservation (if pH adjusted):

Initial when completed:

Date/Time:

Pace Lab #	Glass			Plastic						Vials				Jars			General			VOA Vials (>6mm) *				Volume (mL)										
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU		SP5T	ZPLC	GN	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted		
001																																		2.5 / 5 / 10
002																																		2.5 / 5 / 10
003																																		2.5 / 5 / 10
004																																		2.5 / 5 / 10
005																																		2.5 / 5 / 10
006																																		2.5 / 5 / 10
007																																		2.5 / 5 / 10
008																																		2.5 / 5 / 10
009																																		2.5 / 5 / 10
010																																		2.5 / 5 / 10
011																																		2.5 / 5 / 10
012																																		2.5 / 5 / 10
013																																		2.5 / 5 / 10
014																																		2.5 / 5 / 10
015																																		2.5 / 5 / 10
016																																		2.5 / 5 / 10
017																																		2.5 / 5 / 10
018																																		2.5 / 5 / 10
019																																		2.5 / 5 / 10
020																																		2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: \_\_\_\_\_ Headspace in VOA Vials (>6mm):  Yes  No  N/A \*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 ml amber ascorbic	JGFU	4 oz amber jar unpres	SP5T	120 mL plastic Na Thiosulfate
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 ml amber Na Thio	WGFU	4 oz clear jar unpres	ZPLC	ziploc bag
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear Vial unpres	WPFU	4 oz plastic jar unpres	GN:	
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear Vial HCL				
AG5U	100 mL amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	40 mL clear Vial MeOH				
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear Vial DI				
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4						



**Sample Condition Upon Receipt Form (SCUR)**

Project #: **WO# : 40166084**

Client Name: Env. Audits

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walco  
 Client  Pace Other: \_\_\_\_\_



Tracking #: \_\_\_\_\_

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

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - N/A Type of Ice:  Wet  Blue  Dry  None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: Feb /ICorr: \_\_\_\_\_

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Person examining contents:  
Date: 3/17/18  
Initials: RS

Temp should be above freezing to 6°C.  
Biota Samples may be received at ≤ 0°C.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. no collect time on coc <u>RS 3/17/18</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3. no Rel. Time <u>RS 3/17/18</u>
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A MS/MSD <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. Both samples ID contain "mw" rather than "CR", most labels illegible <u>RS 3/17/18</u>
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

**Client Notification/ Resolution:** If checked, see attached form for additional comments

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

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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Project Manager Review: RMR for pm Date: 3/17/18

March 19, 2018

John Ruetz  
Environmental Audits Inc  
11327 W Lincoln Ave  
West Allis, WI 53227

RE: Project: TD P3 GW  
Pace Project No.: 40165944

Dear John Ruetz:

Enclosed are the analytical results for sample(s) received by the laboratory on March 15, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Ed Raymond, Environmental Audits, Inc  
Stephanie Wagner, Environmental Audits, Inc.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: TD P3 GW

Pace Project No.: 40165944

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: TD P3 GW  
Pace Project No.: 40165944

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40165944001	MW-14	Water	03/12/18 00:00	03/15/18 08:55
40165944002	MW-15	Water	03/12/18 00:00	03/15/18 08:55
40165944003	CR-2	Water	03/12/18 00:00	03/15/18 08:55
40165944004	CR-4	Water	03/12/18 00:00	03/15/18 08:55
40165944005	CR-5	Water	03/12/18 00:00	03/15/18 08:55

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### SAMPLE ANALYTE COUNT

Project: TD P3 GW  
Pace Project No.: 40165944

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40165944001	MW-14	EPA 8260	LAP	64
40165944002	MW-15	EPA 8260	LAP	64
40165944003	CR-2	EPA 8260	LAP	64
40165944004	CR-4	EPA 8260	LAP	64
40165944005	CR-5	EPA 8260	LAP	64

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: TD P3 GW  
Pace Project No.: 40165944

**Sample: MW-14**      **Lab ID: 40165944001**      Collected: 03/12/18 00:00      Received: 03/15/18 08:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/16/18 14:05	630-20-6	
1,1,1-Trichloroethane	67.7	ug/L	1.0	0.50	1		03/16/18 14:05	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/16/18 14:05	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/16/18 14:05	79-00-5	
1,1-Dichloroethane	35.6	ug/L	1.0	0.24	1		03/16/18 14:05	75-34-3	
1,1-Dichloroethene	5.3	ug/L	1.0	0.41	1		03/16/18 14:05	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/16/18 14:05	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/16/18 14:05	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/16/18 14:05	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/16/18 14:05	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/16/18 14:05	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/16/18 14:05	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/16/18 14:05	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/16/18 14:05	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/16/18 14:05	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/16/18 14:05	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/16/18 14:05	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/16/18 14:05	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/16/18 14:05	75-00-3	L1
Chloroform	<2.5	ug/L	5.0	2.5	1		03/16/18 14:05	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/16/18 14:05	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/16/18 14:05	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/16/18 14:05	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/16/18 14:05	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/16/18 14:05	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/16/18 14:05	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/16/18 14:05	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	127-18-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: TD P3 GW  
Pace Project No.: 40165944

**Sample: MW-14**      **Lab ID: 40165944001**      Collected: 03/12/18 00:00      Received: 03/15/18 08:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Toluene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	108-88-3	
Trichloroethene	5.9	ug/L	1.0	0.33	1		03/16/18 14:05	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/16/18 14:05	75-69-4	L1
Vinyl chloride	0.59J	ug/L	1.0	0.18	1		03/16/18 14:05	75-01-4	
cis-1,2-Dichloroethene	5.7	ug/L	1.0	0.26	1		03/16/18 14:05	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/16/18 14:05	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/16/18 14:05	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/16/18 14:05	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/16/18 14:05	98-06-6	
trans-1,2-Dichloroethene	0.37J	ug/L	1.0	0.26	1		03/16/18 14:05	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/16/18 14:05	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	89	%	61-130		1		03/16/18 14:05	460-00-4	
Dibromofluoromethane (S)	110	%	67-130		1		03/16/18 14:05	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		03/16/18 14:05	2037-26-5	

**Sample: MW-15**      **Lab ID: 40165944002**      Collected: 03/12/18 00:00      Received: 03/15/18 08:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/16/18 10:48	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	71-55-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/16/18 10:48	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/16/18 10:48	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		03/16/18 10:48	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/16/18 10:48	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/16/18 10:48	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/16/18 10:48	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/16/18 10:48	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/16/18 10:48	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/16/18 10:48	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/16/18 10:48	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/16/18 10:48	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	142-28-9	

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### ANALYTICAL RESULTS

Project: TD P3 GW

Pace Project No.: 40165944

**Sample: MW-15**      **Lab ID: 40165944002**      Collected: 03/12/18 00:00      Received: 03/15/18 08:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/16/18 10:48	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/16/18 10:48	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/16/18 10:48	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/16/18 10:48	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/16/18 10:48	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/16/18 10:48	75-00-3	L1
Chloroform	<2.5	ug/L	5.0	2.5	1		03/16/18 10:48	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/16/18 10:48	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/16/18 10:48	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/16/18 10:48	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/16/18 10:48	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/16/18 10:48	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/16/18 10:48	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/16/18 10:48	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		03/16/18 10:48	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/16/18 10:48	75-69-4	L1
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/16/18 10:48	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/16/18 10:48	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/16/18 10:48	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/16/18 10:48	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/16/18 10:48	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/16/18 10:48	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/16/18 10:48	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/16/18 10:48	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	86	%	61-130		1		03/16/18 10:48	460-00-4	
Dibromofluoromethane (S)	108	%	67-130		1		03/16/18 10:48	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		03/16/18 10:48	2037-26-5	

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### ANALYTICAL RESULTS

Project: TD P3 GW

Pace Project No.: 40165944

**Sample: CR-2**      **Lab ID: 40165944003**      Collected: 03/12/18 00:00      Received: 03/15/18 08:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/16/18 12:15	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/16/18 12:15	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/16/18 12:15	79-00-5	
1,1-Dichloroethane	3.0	ug/L	1.0	0.24	1		03/16/18 12:15	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/16/18 12:15	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/16/18 12:15	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/16/18 12:15	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/16/18 12:15	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/16/18 12:15	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/16/18 12:15	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/16/18 12:15	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/16/18 12:15	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/16/18 12:15	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/16/18 12:15	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/16/18 12:15	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/16/18 12:15	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/16/18 12:15	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/16/18 12:15	75-00-3	L1
Chloroform	<2.5	ug/L	5.0	2.5	1		03/16/18 12:15	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/16/18 12:15	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/16/18 12:15	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/16/18 12:15	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/16/18 12:15	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/16/18 12:15	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/16/18 12:15	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/16/18 12:15	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	127-18-4	

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### ANALYTICAL RESULTS

Project: TD P3 GW  
Pace Project No.: 40165944

**Sample: CR-2**      **Lab ID: 40165944003**      Collected: 03/12/18 00:00      Received: 03/15/18 08:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Toluene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		03/16/18 12:15	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/16/18 12:15	75-69-4	L1
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/16/18 12:15	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/16/18 12:15	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/16/18 12:15	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:15	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/16/18 12:15	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/16/18 12:15	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/16/18 12:15	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/16/18 12:15	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	93	%	61-130		1		03/16/18 12:15	460-00-4	pH
Dibromofluoromethane (S)	105	%	67-130		1		03/16/18 12:15	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		03/16/18 12:15	2037-26-5	

**Sample: CR-4**      **Lab ID: 40165944004**      Collected: 03/12/18 00:00      Received: 03/15/18 08:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/16/18 12:37	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	71-55-6	
1,1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/16/18 12:37	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/16/18 12:37	79-00-5	
1,1-Dichloroethane	0.49J	ug/L	1.0	0.24	1		03/16/18 12:37	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/16/18 12:37	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/16/18 12:37	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/16/18 12:37	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/16/18 12:37	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/16/18 12:37	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/16/18 12:37	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/16/18 12:37	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/16/18 12:37	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	142-28-9	

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### ANALYTICAL RESULTS

Project: TD P3 GW  
Pace Project No.: 40165944

**Sample: CR-4**      **Lab ID: 40165944004**      Collected: 03/12/18 00:00      Received: 03/15/18 08:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/16/18 12:37	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/16/18 12:37	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/16/18 12:37	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/16/18 12:37	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/16/18 12:37	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/16/18 12:37	75-00-3	L1
Chloroform	<2.5	ug/L	5.0	2.5	1		03/16/18 12:37	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/16/18 12:37	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/16/18 12:37	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/16/18 12:37	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/16/18 12:37	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/16/18 12:37	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/16/18 12:37	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/16/18 12:37	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		03/16/18 12:37	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/16/18 12:37	75-69-4	L1
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/16/18 12:37	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/16/18 12:37	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/16/18 12:37	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:37	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/16/18 12:37	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/16/18 12:37	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/16/18 12:37	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/16/18 12:37	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	88	%	61-130		1		03/16/18 12:37	460-00-4	
Dibromofluoromethane (S)	107	%	67-130		1		03/16/18 12:37	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		03/16/18 12:37	2037-26-5	

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### ANALYTICAL RESULTS

Project: TD P3 GW

Pace Project No.: 40165944

**Sample: CR-5**      **Lab ID: 40165944005**      Collected: 03/12/18 00:00      Received: 03/15/18 08:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		03/16/18 12:59	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		03/16/18 12:59	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		03/16/18 12:59	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		03/16/18 12:59	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		03/16/18 12:59	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		03/16/18 12:59	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		03/16/18 12:59	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		03/16/18 12:59	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		03/16/18 12:59	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		03/16/18 12:59	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		03/16/18 12:59	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		03/16/18 12:59	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		03/16/18 12:59	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		03/16/18 12:59	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		03/16/18 12:59	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		03/16/18 12:59	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		03/16/18 12:59	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		03/16/18 12:59	75-00-3	L1
Chloroform	<2.5	ug/L	5.0	2.5	1		03/16/18 12:59	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		03/16/18 12:59	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		03/16/18 12:59	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		03/16/18 12:59	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		03/16/18 12:59	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		03/16/18 12:59	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		03/16/18 12:59	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		03/16/18 12:59	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	127-18-4	

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### ANALYTICAL RESULTS

Project: TD P3 GW

Pace Project No.: 40165944

**Sample: CR-5**      **Lab ID: 40165944005**      Collected: 03/12/18 00:00      Received: 03/15/18 08:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
Toluene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		03/16/18 12:59	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		03/16/18 12:59	75-69-4	L1
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		03/16/18 12:59	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/16/18 12:59	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		03/16/18 12:59	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		03/16/18 12:59	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		03/16/18 12:59	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		03/16/18 12:59	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		03/16/18 12:59	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		03/16/18 12:59	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	89	%	61-130		1		03/16/18 12:59	460-00-4	
Dibromofluoromethane (S)	107	%	67-130		1		03/16/18 12:59	1868-53-7	
Toluene-d8 (S)	103	%	70-130		1		03/16/18 12:59	2037-26-5	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: TD P3 GW  
Pace Project No.: 40165944

QC Batch: 283463 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 40165944001, 40165944002, 40165944003, 40165944004, 40165944005

METHOD BLANK: 1659969 Matrix: Water  
Associated Lab Samples: 40165944001, 40165944002, 40165944003, 40165944004, 40165944005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	03/16/18 08:14	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	03/16/18 08:14	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	03/16/18 08:14	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	03/16/18 08:14	
1,1-Dichloroethane	ug/L	<0.24	1.0	03/16/18 08:14	
1,1-Dichloroethene	ug/L	<0.41	1.0	03/16/18 08:14	
1,1-Dichloropropene	ug/L	<0.44	1.0	03/16/18 08:14	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	03/16/18 08:14	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	03/16/18 08:14	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	03/16/18 08:14	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	03/16/18 08:14	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	03/16/18 08:14	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	03/16/18 08:14	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	03/16/18 08:14	
1,2-Dichloroethane	ug/L	<0.17	1.0	03/16/18 08:14	
1,2-Dichloropropane	ug/L	<0.23	1.0	03/16/18 08:14	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	03/16/18 08:14	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	03/16/18 08:14	
1,3-Dichloropropane	ug/L	<0.50	1.0	03/16/18 08:14	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	03/16/18 08:14	
2,2-Dichloropropane	ug/L	<0.48	1.0	03/16/18 08:14	
2-Chlorotoluene	ug/L	<0.50	1.0	03/16/18 08:14	
4-Chlorotoluene	ug/L	<0.21	1.0	03/16/18 08:14	
Benzene	ug/L	<0.50	1.0	03/16/18 08:14	
Bromobenzene	ug/L	<0.23	1.0	03/16/18 08:14	
Bromochloromethane	ug/L	<0.34	1.0	03/16/18 08:14	
Bromodichloromethane	ug/L	<0.50	1.0	03/16/18 08:14	
Bromoform	ug/L	<0.50	1.0	03/16/18 08:14	
Bromomethane	ug/L	<2.4	5.0	03/16/18 08:14	
Carbon tetrachloride	ug/L	<0.50	1.0	03/16/18 08:14	
Chlorobenzene	ug/L	<0.50	1.0	03/16/18 08:14	
Chloroethane	ug/L	<0.37	1.0	03/16/18 08:14	
Chloroform	ug/L	<2.5	5.0	03/16/18 08:14	
Chloromethane	ug/L	<0.50	1.0	03/16/18 08:14	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	03/16/18 08:14	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	03/16/18 08:14	
Dibromochloromethane	ug/L	<0.50	1.0	03/16/18 08:14	
Dibromomethane	ug/L	<0.43	1.0	03/16/18 08:14	
Dichlorodifluoromethane	ug/L	<0.22	1.0	03/16/18 08:14	
Diisopropyl ether	ug/L	<0.50	1.0	03/16/18 08:14	
Ethylbenzene	ug/L	<0.50	1.0	03/16/18 08:14	

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### QUALITY CONTROL DATA

Project: TD P3 GW  
Pace Project No.: 40165944

METHOD BLANK: 1659969 Matrix: Water  
Associated Lab Samples: 40165944001, 40165944002, 40165944003, 40165944004, 40165944005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	03/16/18 08:14	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	03/16/18 08:14	
m&p-Xylene	ug/L	<1.0	2.0	03/16/18 08:14	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	03/16/18 08:14	
Methylene Chloride	ug/L	<0.23	1.0	03/16/18 08:14	
n-Butylbenzene	ug/L	<0.50	1.0	03/16/18 08:14	
n-Propylbenzene	ug/L	<0.50	1.0	03/16/18 08:14	
Naphthalene	ug/L	<2.5	5.0	03/16/18 08:14	
o-Xylene	ug/L	<0.50	1.0	03/16/18 08:14	
p-Isopropyltoluene	ug/L	<0.50	1.0	03/16/18 08:14	
sec-Butylbenzene	ug/L	<2.2	5.0	03/16/18 08:14	
Styrene	ug/L	<0.50	1.0	03/16/18 08:14	
tert-Butylbenzene	ug/L	<0.18	1.0	03/16/18 08:14	
Tetrachloroethene	ug/L	<0.50	1.0	03/16/18 08:14	
Toluene	ug/L	<0.50	1.0	03/16/18 08:14	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	03/16/18 08:14	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	03/16/18 08:14	
Trichloroethene	ug/L	<0.33	1.0	03/16/18 08:14	
Trichlorofluoromethane	ug/L	<0.18	1.0	03/16/18 08:14	
Vinyl chloride	ug/L	<0.18	1.0	03/16/18 08:14	
4-Bromofluorobenzene (S)	%	93	61-130	03/16/18 08:14	
Dibromofluoromethane (S)	%	103	67-130	03/16/18 08:14	
Toluene-d8 (S)	%	102	70-130	03/16/18 08:14	

LABORATORY CONTROL SAMPLE: 1659970

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	61.5	123	70-130	
1,1,1,2-Tetrachloroethane	ug/L	50	54.7	109	70-130	
1,1,2-Trichloroethane	ug/L	50	53.8	108	70-130	
1,1-Dichloroethane	ug/L	50	62.2	124	71-132	
1,1-Dichloroethene	ug/L	50	63.5	127	75-130	
1,2,4-Trichlorobenzene	ug/L	50	44.5	89	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	48.8	98	63-123	
1,2-Dibromoethane (EDB)	ug/L	50	54.9	110	70-130	
1,2-Dichlorobenzene	ug/L	50	55.4	111	70-130	
1,2-Dichloroethane	ug/L	50	58.7	117	70-131	
1,2-Dichloropropane	ug/L	50	54.6	109	80-120	
1,3-Dichlorobenzene	ug/L	50	54.9	110	70-130	
1,4-Dichlorobenzene	ug/L	50	55.8	112	70-130	
Benzene	ug/L	50	56.7	113	73-145	
Bromodichloromethane	ug/L	50	57.2	114	70-130	
Bromoform	ug/L	50	57.3	115	67-130	
Bromomethane	ug/L	50	51.7	103	26-128	

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### QUALITY CONTROL DATA

Project: TD P3 GW  
Pace Project No.: 40165944

LABORATORY CONTROL SAMPLE: 1659970

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	62.5	125	70-133	
Chlorobenzene	ug/L	50	56.4	113	70-130	
Chloroethane	ug/L	50	61.3	123	58-120	L1
Chloroform	ug/L	50	59.5	119	80-121	
Chloromethane	ug/L	50	61.5	123	40-127	
cis-1,2-Dichloroethene	ug/L	50	53.5	107	70-130	
cis-1,3-Dichloropropene	ug/L	50	52.4	105	70-130	
Dibromochloromethane	ug/L	50	55.2	110	70-130	
Dichlorodifluoromethane	ug/L	50	62.2	124	20-135	
Ethylbenzene	ug/L	50	55.4	111	87-129	
Isopropylbenzene (Cumene)	ug/L	50	56.3	113	70-130	
m&p-Xylene	ug/L	100	117	117	70-130	
Methyl-tert-butyl ether	ug/L	50	53.2	106	66-143	
Methylene Chloride	ug/L	50	56.4	113	70-130	
o-Xylene	ug/L	50	54.5	109	70-130	
Styrene	ug/L	50	54.8	110	70-130	
Tetrachloroethene	ug/L	50	55.0	110	70-130	
Toluene	ug/L	50	54.6	109	82-130	
trans-1,2-Dichloroethene	ug/L	50	57.8	116	75-132	
trans-1,3-Dichloropropene	ug/L	50	51.8	104	70-130	
Trichloroethene	ug/L	50	57.3	115	70-130	
Trichlorofluoromethane	ug/L	50	69.7	139	76-133	L1
Vinyl chloride	ug/L	50	63.8	128	57-136	
4-Bromofluorobenzene (S)	%			94	61-130	
Dibromofluoromethane (S)	%			109	67-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1660687 1660688

Parameter	Units	40165944002		1660687		1660688		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
1,1,1-Trichloroethane	ug/L	<0.50	50	50	59.2	59.1	118	118	70-134	0	20			
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	56.7	57.7	113	115	70-130	2	20			
1,1,2-Trichloroethane	ug/L	<0.20	50	50	54.6	54.4	109	109	70-130	0	20			
1,1-Dichloroethane	ug/L	<0.24	50	50	59.0	58.6	118	117	71-133	1	20			
1,1-Dichloroethene	ug/L	<0.41	50	50	59.0	58.4	118	117	75-136	1	20			
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	47.0	48.1	94	96	70-130	2	20			
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	51.4	52.6	103	105	63-123	2	20			
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	55.2	54.9	110	110	70-130	1	20			
1,2-Dichlorobenzene	ug/L	<0.50	50	50	57.5	57.6	115	115	70-130	0	20			
1,2-Dichloroethane	ug/L	<0.17	50	50	57.4	57.7	115	115	70-131	1	20			
1,2-Dichloropropane	ug/L	<0.23	50	50	53.6	53.9	107	108	80-120	1	20			
1,3-Dichlorobenzene	ug/L	<0.50	50	50	56.4	56.7	113	113	70-130	1	20			
1,4-Dichlorobenzene	ug/L	<0.50	50	50	57.9	58.9	116	118	70-130	2	20			

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### QUALITY CONTROL DATA

Project: TD P3 GW  
Pace Project No.: 40165944

Parameter	Units	40165944002		MSD		MSD		MS		MSD		% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec								
Benzene	ug/L	<0.50	50	50	54.1	54.7	108	109	73-145	1	20					
Bromodichloromethane	ug/L	<0.50	50	50	53.6	54.2	107	108	70-130	1	20					
Bromoform	ug/L	<0.50	50	50	55.4	55.4	111	111	67-130	0	20					
Bromomethane	ug/L	<2.4	50	50	43.5	43.1	87	86	26-129	1	20					
Carbon tetrachloride	ug/L	<0.50	50	50	58.1	60.0	116	120	70-134	3	20					
Chlorobenzene	ug/L	<0.50	50	50	55.2	54.7	110	109	70-130	1	20					
Chloroethane	ug/L	<0.37	50	50	52.9	52.5	106	105	58-120	1	20					
Chloroform	ug/L	<2.5	50	50	57.7	57.8	115	116	80-121	0	20					
Chloromethane	ug/L	<0.50	50	50	43.1	43.7	86	87	40-128	1	20					
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	50.8	59.0	102	118	70-130	15	20					
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	51.1	52.9	102	106	70-130	4	20					
Dibromochloromethane	ug/L	<0.50	50	50	57.0	56.0	114	112	70-130	2	20					
Dichlorodifluoromethane	ug/L	<0.22	50	50	29.6	29.0	59	58	20-146	2	20					
Ethylbenzene	ug/L	<0.50	50	50	54.7	55.0	109	110	87-129	0	20					
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	55.3	54.6	111	109	70-130	1	20					
m&p-Xylene	ug/L	<1.0	100	100	111	112	111	112	70-130	1	20					
Methyl-tert-butyl ether	ug/L	<0.17	50	50	50.4	52.8	101	106	66-143	5	20					
Methylene Chloride	ug/L	<0.23	50	50	54.1	54.5	108	109	70-130	1	20					
o-Xylene	ug/L	<0.50	50	50	53.4	53.5	107	107	70-130	0	20					
Styrene	ug/L	<0.50	50	50	54.7	54.8	109	110	70-130	0	20					
Tetrachloroethene	ug/L	<0.50	50	50	54.2	52.8	108	106	70-130	3	20					
Toluene	ug/L	<0.50	50	50	54.1	54.3	108	109	82-131	1	20					
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	55.9	56.3	112	113	75-135	1	20					
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	51.5	51.4	103	103	70-130	0	20					
Trichloroethene	ug/L	<0.33	50	50	54.2	55.5	108	111	70-130	2	20					
Trichlorofluoromethane	ug/L	<0.18	50	50	59.0	58.8	118	118	76-150	0	20					
Vinyl chloride	ug/L	<0.18	50	50	48.3	48.4	97	97	56-143	0	20					
4-Bromofluorobenzene (S)	%						99	98	61-130							
Dibromofluoromethane (S)	%						105	107	67-130							
Toluene-d8 (S)	%						99	99	70-130							

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## QUALIFIERS

Project: TD P3 GW

Pace Project No.: 40165944

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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 LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

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 at or above the adjusted LOD.

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.

### ANALYTE QUALIFIERS

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.

pH Post-analysis pH measurement indicates insufficient VOA sample preservation.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TD P3 GW

Pace Project No.: 40165944

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40165944001	MW-14	EPA 8260	283463		
40165944002	MW-15	EPA 8260	283463		
40165944003	CR-2	EPA 8260	283463		
40165944004	CR-4	EPA 8260	283463		
40165944005	CR-5	EPA 8260	283463		

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**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

40165944  
Page 19 of 21

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company:	Environmental Audits Inc.	Report To:	jfruetz@yahoo.com;	Attention:	John Ruetz
Address:	11327 W Lincoln Avenue West Allis WI 53051	Copy To:	eeiii@wi.rr.com; john@environmentalaudits.net	Company Name:	Environmental Audits Inc.
Email To:	john@environmentalaudits.net	Purchase Order No.:	Verbal	Address:	11327 W Lincoln Avenue
Phone:	414-226-5563	Project Name:	TD P3 GW	Pace Quote Reference Manager:	
Requested Due Date/AT:		Project Number:		Pace Profile #:	
<b>REGULATORY AGENCY</b>			<b>REGULATORY AGENCY</b>		
<input type="checkbox"/> NPDES <input checked="" type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER			<input type="checkbox"/> NPDES <input checked="" type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER		
Site Location: WI			Site Location: WI		

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WASTE WATER WT WASTE WATER PRODUCT SOLID WPE WPE WPE OTHER TISSUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.	
					COMPOSITE START	COMPOSITE END/GRAB			H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other					↓
1	001	MMW-14	GW	G	3/12/18			3												
2	002	MMW-15	GW	G	3/12/18			3												
3	003	CR-2	GW	G	3/12/18			3												
4	004	CR-4	GW	G	3/12/18			3												
5	005	CR-5	GW	G	3/12/18			3												
6			GW	G	3/12/18			3												
7																				
8																				
9																				
10																				
11																				
12																				

<b>ADDITIONAL COMMENTS</b>		<b>RELINQUISHED BY / AFFILIATION</b>		<b>DATE</b>		<b>TIME</b>		<b>ACCEPTED BY / AFFILIATION</b>		<b>DATE</b>		<b>TIME</b>		<b>SAMPLE CONDITIONS</b>	
		Stephanie Wagner		3/12/18		1400		Mary Jannina		3/12/18		1335			
		Mary Jannina		3/12/18		1400		Mary Jannina		3/12/18		1335			
		ES Dept 3518		3/15/18		0855		DANIEL RICE		3/15/18		0855			

<b>SAMPLER NAME AND SIGNATURE</b>		<b>DATE Signed (MM/DD/YY)</b>	
PRINT Name of SAMPLER: John Ruetz		3/12/18	
SIGNATURE of SAMPLER:		3/12/18	

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.  
F-ALL-Q-020rev.08, 12-Oct-2007

Client Name: ENV Audits

Sample Preservation Receipt Form  
Project # 40165944

Pace Analytical Services, LLC  
1241 Bellevue Street, Suite 9  
Green Bay, WI 53302

All containers needing preservation have been checked and noted below:  Yes  No  N/A Lab Sld #ID of preservation (if pH adjusted):

Initial when completed:

Date/Time:

Page Lab #	Glass	Plastic	Viials	Jars	General	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001	AG1U	BP1U	DG9A	JGFU	SP5T							2.5 / 5 / 10
002	AG1H	BP2N	DG9T	WGFU	ZPLC							2.5 / 5 / 10
003	AG4S	BP2Z	VG9U	WPFU	GN							2.5 / 5 / 10
004	AG4U	BP3U	VG9H									2.5 / 5 / 10
005	AG5U	BP3C	VG9M									2.5 / 5 / 10
006	AG2S	BP3N	VG9D									2.5 / 5 / 10
007	BG3U	BP3S										2.5 / 5 / 10
008												2.5 / 5 / 10
009												2.5 / 5 / 10
010												2.5 / 5 / 10
011												2.5 / 5 / 10
012												2.5 / 5 / 10
013												2.5 / 5 / 10
014												2.5 / 5 / 10
015												2.5 / 5 / 10
016												2.5 / 5 / 10
017												2.5 / 5 / 10
018												2.5 / 5 / 10
019												2.5 / 5 / 10
020												2.5 / 5 / 10

Exceptions to preservation check: VOA Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: Headspace in VOA Vials (>6mm):  Yes  No  N/A \*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3C	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	

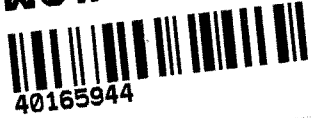
**Sample Condition Upon Receipt Form (SCUR)**

Client Name: ENV Audits

Project #: \_\_\_\_\_

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walco  
 Client  Pace Other: \_\_\_\_\_

WO#: **40165944**



Tracking #: \_\_\_\_\_

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

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - N/A Type of Ice:  Wet  Blue  Dry  None

Cooler Temperature Uncorr: N/A Corr: \_\_\_\_\_  Samples on ice, cooling process has begun

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Temp should be above freezing to 6°C.  
Biota Samples may be received at ≤ 0°C.

Person examining contents:  
Date: 3/15/18  
Initials: VS

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>no collect times on coc</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3. <u>no Rel-Time</u>
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	MS/MSD <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

**Client Notification/ Resolution:**  
Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Comments/ Resolution: \_\_\_\_\_  
If checked, see attached form for additional comments

Project Manager Review: AK for DM Date: 3/15/18

**State of Wisconsin  
Department of Natural Resources**

**Mann-Kendall Statistical Test  
Form 4400-215 (2/2001)**

**Remediation and Redevelopment Program**

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Site Name : **Twin Disc Plant 3** BRRTS No. = **02-52-378657** Well Number = **CR-3**

Compound ->		DRO	1,1-DCA	1,1-DCE	1,1,1-TCA	VC	Total VOC
Event Number	Sampling Date (most recent last)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1	24-Feb-16	85.30	80,000.00	4,070.00	34,200.00	3,820.00	137,590.00
2	16-May-16	61.90	119,000.00	7,210.00	54,300.00	4,570.00	206,280.00
3	2-Aug-16		101,000.00	7,880.00	33,500.00	3,560.00	162,160.00
4	10-Nov-16		84,600.00	4,030.00	35,100.00	3,460.00	148,646.00
5	22-Feb-17		98,900.00	4,150.00	31,300.00	3,770.00	166,620.00
6	12-Apr-17		115,000.00	6,520.00	38,400.00	5,780.00	202,400.00
7	20-Jul-17		73,000.00	2,390.00	15,200.00	3,530.00	124,289.00
8	17-Oct-17		82,800.00	2,850.00	21,900.00	3,770.00	147,940.00
9	14-Mar-18		60,800.00	2,360.00	18,400.00	3,810.00	111,630.00
10	15-May-18		80,400.00	2,730.00	13,600.00	4,030.00	146,474.00

Mann Kendall Statistic (S) =	-1.0	-17.0	-23.0	-27.0	4.0	-15.0
Number of Rounds (n) =	2	10	10	10	10	10
Average =	73.60	89550.00	4419.00	29590.00	4010.00	155402.90
Standard Deviation =	16.546	18496.201	2060.170	12495.017	697.105	30461.643
Coefficient of Variation(CV)=	0.225	0.207	0.466	0.422	0.174	0.196

Error Check, Blank if No Errors Detected n<4

Trend ≥ 80% Confidence Level	n<4	<b>DECREASING</b>	<b>DECREASING</b>	<b>DECREASING</b>	No Trend	<b>DECREASING</b>
Trend ≥ 90% Confidence Level	n<4	<b>DECREASING</b>	<b>DECREASING</b>	<b>DECREASING</b>	No Trend	No Trend

Stability Test, If No Trend Exists at 80% Confidence Level	n<4 n<4	NA	NA	NA	<b>CV ≤ 1 STABLE</b>	NA
--	------------	----	----	----	--------------------------	----

Data Entry By = **EER** Date = **6-Jul-18** Checked By = **EER**

**State of Wisconsin  
Department of Natural Resources**

**Mann-Kendall Statistical Test  
Form 4400-215 (2/2001)**

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Site Name : **Twin Disc Plant 3**      BRRTS No. = **02-52-378657**      Well Number = **CR-2**

Compound ->		DRO	Total VOC				
Event Number	Sampling Date (most recent last)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1	24-Feb-16	0.24	0.70				
2	16-May-16	0.32	1.00				
3	2-Aug-16		1.00				
4	10-Nov-16		2.10				
5	22-Feb-17		2.10				
6	12-Apr-17		2.00				
7	20-Jul-17		2.50				
8	17-Oct-17		3.20				
9	12-Mar-18		3.00				
10	15-May-18		2.90				

Mann Kendall Statistic (S) =	1.0	33.0	0.0	0.0	0.0	0.0
Number of Rounds (n) =	2	10	0	0	0	0
Average =	0.28	2.05	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Standard Deviation =	0.057	0.893	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Coefficient of Variation(CV)=	0.202	0.436	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Error Check, Blank if No Errors Detected	n<4		n<4	n<4	n<4	n<4
Trend ≥ 80% Confidence Level	n<4	<b>INCREASING</b>	n<4	n<4	n<4	n<4
Trend ≥ 90% Confidence Level	n<4	<b>INCREASING</b>	n<4	n<4	n<4	n<4
Stability Test, If No Trend Exists at 80% Confidence Level	n<4		n<4	n<4	n<4	n<4
	n<4	NA	n<4	n<4	n<4	n<4

Data Entry By = **EER**      Date = **6-Jul-18**      Checked By = **EER**



**State of Wisconsin  
Department of Natural Resources**

**Mann-Kendall Statistical Test  
Form 4400-215 (2/2001)**

**Remediation and Redevelopment Program**

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Site Name : **Twin Disc Plant 3** BRRTS No. = **02-52-378657** Well Number = **CR-1**

Compound ->		DRO	Total VOC				
Event Number	Sampling Date (most recent last)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)	Concentration (leave blank if no data)
1	24-Feb-16	1.40					
2	16-May-16	0.63	0.85				
3	2-Aug-16		1.18				
4	10-Nov-16		1.40				
5	22-Feb-17						
6	12-Apr-17		0.91				
7	20-Jul-17		0.73				
8	17-Oct-17						
9	14-Mar-18		0.32				
10	15-May-18		0.38				

Mann Kendall Statistic (S) =	-1.0	-11.0	0.0	0.0	0.0	0.0
Number of Rounds (n) =	2	7	0	0	0	0
Average =	1.02	0.82	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Standard Deviation =	0.544	0.393	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Coefficient of Variation(CV)=	0.536	0.477	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Error Check, Blank if No Errors Detected	n<4		n<4	n<4	n<4	n<4
Trend ≥ 80% Confidence Level	n<4	<b>DECREASING</b>	n<4	n<4	n<4	n<4
Trend ≥ 90% Confidence Level	n<4	<b>DECREASING</b>	n<4	n<4	n<4	n<4
Stability Test, If No Trend Exists at 80% Confidence Level	n<4		n<4	n<4	n<4	n<4
	n<4	NA	n<4	n<4	n<4	n<4

Data Entry By = **EER** Date = **6-Jul-18** Checked By = **EER**