Via Email

March 28, 2016

NC DOT – Roadside Environmental
1558 Mail Service Center
Raleigh, NC 27699

Attention: Mr. Ethan Caldwell, PE and LG

Re: Site Closure Report
Former NC DOT Site (1119 East Sugar Creek Road)
Charlotte, North Carolina
H&H Job No. DOT-513

Dear Ethan:

In accordance with our authorized scope of work, please find the attached electronic copy of this report in PDF format. Per your request, two copies of this report will also be mailed to you. If you have any questions or need further information, please do not hesitate to contact me.

Sincerely,

Hart & Hickman, PC

Matt Bramblett, PE
Principal

Attachment

cc: Mr. Ethan Caldwell, PE, LG (via US Mail)
Mr. Brian Tucker, UHOP (via Email and Certified Mail)
Mr. Marcus Plescia, MD, MPH, Mecklenburg County Health Dept. (via Certified Mail)

Site Closure Report
Former NC DOT Division 10 Maintenance Site

1119 E. Sugar Creek Road
Charlotte, North Carolina

H&H Job No. DOT-513
March 28, 2016

hart hickman

SMARTER ENVIRONMENTAL SOLUTIONS

Hart & Hickman 20th ANNIVERSARY Quality Integrity Expertise Teamwork Safety

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Site Closure Report
Former NC DOT Maintenance Facility
1119 E. Sugar Creek Road
Charlotte, North Carolina
H&H Job No. DOT-513

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Site Closure Report
Former NC DOT Maintenance Facility
1119 E. Sugar Creek Road
Charlotte, North Carolina
H&H Job No. DOT-513

1.0 Introduction

Hart & Hickman, PC (H&H) is submitting this report to document quarterly groundwater monitoring activities conducted in 2015, which support incident closure at the former North Carolina (NC) Department of Transportation (DOT) maintenance facility (site) located at 1119 E. Sugar Creek Road in Charlotte, NC.

The site has been redeveloped with a church that is owned by the United House of Prayer for All People. A site location map is provided as Figure 1. A site plan showing former DOT structures and current monitoring well locations is provided as Figure 2.

NC DOT previously operated an equipment and vehicle maintenance facility at the site from 1946 until 1981. Chlorinated solvents including carbon tetrachloride, trichloroethene (TCE), and 1,1,1-trichloroethane were stored at certain NC DOT maintenance facilities. When needed, technicians would transport the solvents from the maintenance facilities to nearby asphalt testing labs to conduct asphalt extraction tests for road construction projects.

In the early 1990s, assessment activities related to petroleum underground storage tanks (USTs) were conducted at the site. Petroleum impacts were identified in soil and groundwater at the site. Analyses of groundwater samples also indicated the presence of chlorinated volatile organic compounds (VOCs) in groundwater.

The NC Department of Environment and Natural Resources (DENR) approved a Corrective Action Plan (CAP), which utilized air sparging for remediation of petroleum-related groundwater impacts, and the air sparging remediation system was installed in September 1998. The petroleum UST release subsequently received a No Further Action required letter from DENR.

A bioenhancement and monitored natural attenuation CAP was prepared by Earth Tech to address the chlorinated VOCs, primarily TCE, detected in groundwater at concentrations above the 15A NC Administrative Code 2L Groundwater Quality Standards (2L standards). This CAP was approved by DENR in February 2003. In January 2005, a bioenhancement injection of Hydrogen Release Compound (HRC®) was completed in three target areas of the site to enhance the natural attenuation of TCE. Earth Tech monitored groundwater at the site until 2009. Historical groundwater analytical results from 1998 through 2009 are provided in Appendix A.

H&H began work on this project in 2009. During initial work on this project, H&H confirmed that VOC soil impacts did not remain by reviewing previous data and installing and sampling nine soil borings. The borings were installed in the areas where the highest TCE concentrations were detected in groundwater. TCE and other VOCs were not detected in soil samples collected from the soil borings. In addition, H&H updated the receptor survey by surveying the area for water supply wells and surface water receptors. No receptors of concern were identified. The soil assessment and receptor survey update were documented in H&H's May 28, 2010 *Soil Assessment and Receptor Survey Report*.

Target VOCs were not detected in groundwater samples collected during the July 2010 and July 2013 monitoring events at concentrations above 2L standards. After those sampling events, H&H started semi-annual groundwater monitoring to determine if the absence of impacts above standards would be sustained. However, low-level TCE impacts just above the 2L standard were again detected during the February 2014 monitoring event and the monitoring frequency was returned to annually. The groundwater analytical results of the February 2015 monitoring event did not indicate TCE above the 2L standard as documented in H&H's *Annual Groundwater Monitoring Report* dated April 30, 2015.

Because TCE was not detected above the 2L Standard during the February 2015 monitoring event, the monitoring frequency was increased to quarterly to determine if TCE concentrations below the 2L Standards could be sustained This report documents the results of the May 27, 2015; September 4, 2015; and November 20, 2015 quarterly monitoring events.

2.0 Groundwater Monitoring

H&H conducted quarterly groundwater monitoring events on May 27, 2015; September 4, 2015; and November 20, 2015. Each monitoring event included site-wide monitoring well gauging and sampling of five monitoring wells including MW-5, MW-10 through MW-12, and MW-14. A summary of these activities is provided below.

2.1 Groundwater Levels and Flow Direction

The water levels in monitoring wells MW-5, MW-10 through MW-12, and MW-14 were gauged during each event. The depth-to-water in each monitoring well was measured from the top of the monitoring well casing. Surveyed top-of-casing elevations and depth-to-water measurements were used to calculate the groundwater elevation at each monitoring well. The top-of-casing elevations, depth-to-groundwater measurements, and calculated groundwater elevations obtained during the monitoring events are summarized in Table 1.

Calculated groundwater elevations based on the November 20, 2015 depth to water measurements were used to develop a shallow groundwater potentiometric surface map, which is depicted on Figure 2. As depicted on Figure 2, the shallow groundwater flow direction across the site is generally to the southeast. An area of water table mounding was observed in the vicinity of MW-5 (Figure 2), which is consistent with historical monitoring events. The calculated horizontal hydraulic gradient based on the November 20, 2015 water level measurements was approximately 0.022 ft/ft (measured from MW-10 to MW-11).

2.2 Groundwater Sampling Procedures

After gauging water levels, H&H personnel purged the five monitoring wells prior to collecting the groundwater samples to evacuate static groundwater and ensure the groundwater samples were representative of aquifer conditions. Site monitoring wells were purged using dedicated disposable bailers. Purging was considered complete after the required well volume was evacuated, the well was purged dry, or when field measurements indicated that groundwater pH, specific conductivity and temperature were stable.

Following purging, groundwater samples were collected from each monitoring well with the dedicated bailer used for purging. Groundwater was slowly transferred from the bailers into laboratory-supplied sample containers. Sample containers were labeled with sample ID, site name, sampling date and time, sample preservative, and sampler's initials. After sample collection, the filled sample containers were placed and maintained in a chilled cooler and couriered to Pace Analytical Services, Inc. (Pace), a NC-certified laboratory, for analytical testing. A chain-of-custody record and trip blank accompanied the samples.

2.3 Groundwater Sample Results

Groundwater samples were analyzed for VOCs by Environmental Protection Agency (EPA) Method 6200B. The laboratory analytical data reports for the May 27, 2015; September 4, 2015; and November 20, 2015 monitoring events and associated chain-of-custody records are provided in Appendix B. A summary of TCE and TCE degradation product cis-1,2-dichloroethene (cDCE) analytical data is provided in Table 2. Other VOCs were not detected in the groundwater samples.

TCE and cDCE were not detected above 2L Standards in the groundwater samples collected from the site during the May 27, 2015; September 4, 2015; and November 20, 2015 monitoring events. A map summarizing the groundwater sample analytical results is provided as Figure 3. As shown on Figure 3, low-level concentrations of TCE, which did not exceed the 2L Standard of 3.0 micrograms per liter (µg/l), were detected at monitoring wells MW-5, MW-11, and MW-14 during the May 27, 2015; September 4, 2015; and November 20, 2015 monitoring events.

Low-level concentrations of cDCE, significantly below the 2L Standard of 70 µg/l, were detected at monitoring well MW-5 during the May 27, 2015 and November 20, 2015 monitoring events. A low-level concentration of cDCE was also detected at MW-11 during the September 4, 2015 monitoring event.

3.0 Summary and Conclusions

H&H completed a groundwater monitoring event in February 2015. The analytical results of the February 2015 monitoring event did not indicate DOT target compounds, specifically TCE, above the 2L Standard. H&H subsequently performed three quarterly groundwater monitoring events on May 27, 2015; September 4, 2015; and November 20, 2015 to determine if TCE concentrations below the 2L Standard could be sustained. Each quarterly groundwater monitoring events included monitoring well water level gauging and the collection of groundwater samples from monitoring wells MW-5, MW-10 through MW-12, and MW-14 for analysis of VOCs by EPA Method 6200B. The analytical results of the May, September, and November 2015 monitoring events did not indicate the presence of VOCs, including TCE, at concentrations above 2L Standards.

TCE has not been detected above the 2L Standard in four consecutive monitoring events, which were conducted on February 6, 2015; May 27, 2015; September 4, 2015; and November 20, 2015, indicating no impacts above the 2L Standard. Based on the results of these four sampling events and prior trends, the groundwater impacts appear to have permanently attenuated to below standards.

Overall, the data shows a consistent decrease in chlorinated VOC concentrations over time, as shown on the graph included as Figure 4. TCE concentrations in site groundwater do not exceed the 2L Standard, indicating that the HRC bioenhancement injection event conducted in 2005 and monitored natural attenuation have successfully remediated groundwater at the site. Because TCE and TCE degradation products have not been detected above 2L Standards in four consecutive groundwater monitoring events, and no soil impacts have been detected as reported in H&H's May 28, 2010 *Soil Assessment and Receptor Report*; H&H believes that the data demonstrate successful remediation of the site. Corrective action has been achieved in accordance with the 2003 CAP. Based on these data, H&H does not recommend additional monitoring related to the former maintenance facility. Please note that H&H can assist with abandonment of site monitoring wells upon DOT's request.

Table 1
Summary of Monitoring Well Construction and Groundwater Elevation Data
Former NC DOT Division 10 Maintenance Site
1119 East Sugar Creek Road
Charlotte, North Carolina
H&H Job No. DOT-513

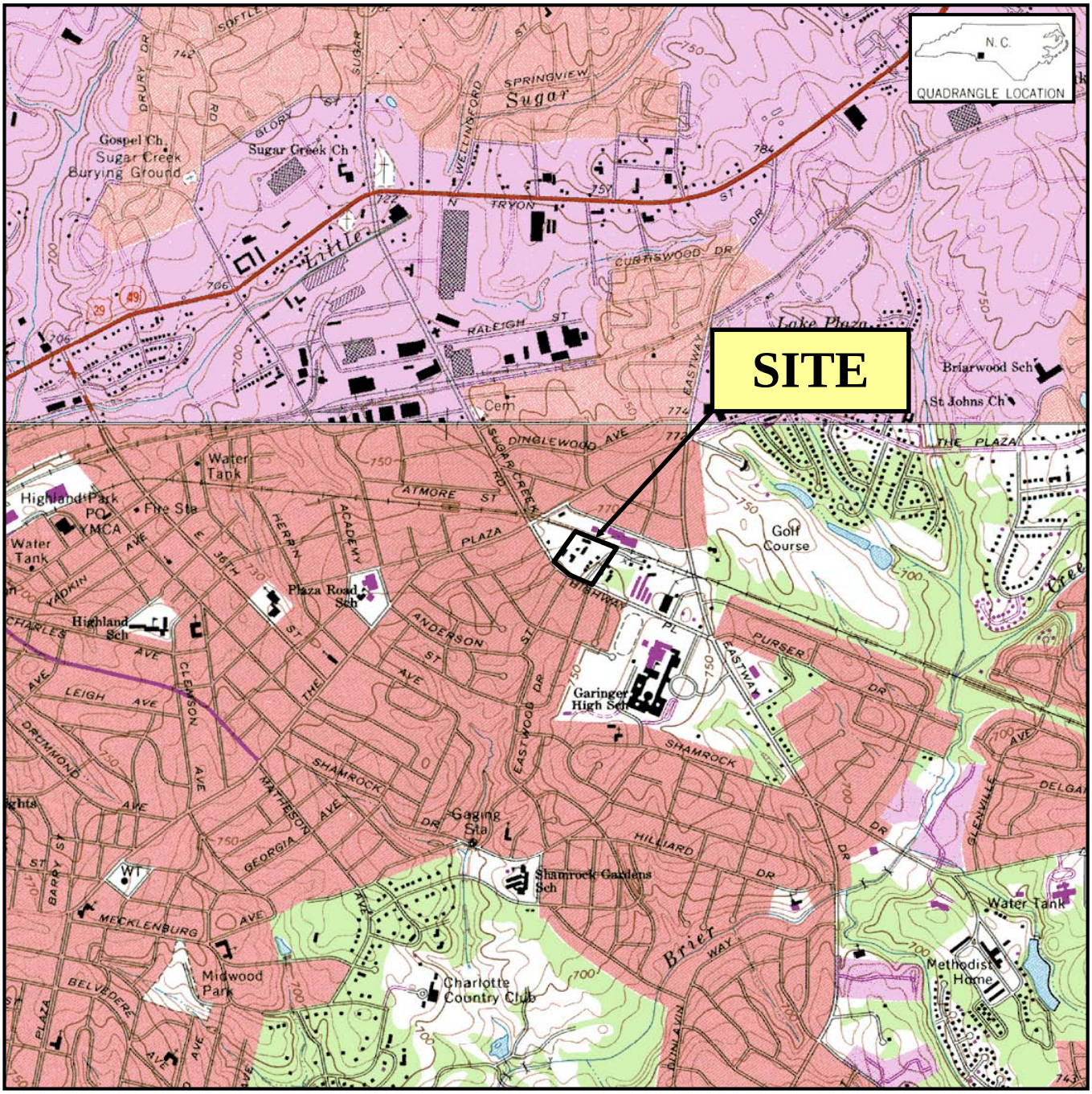
					8/16/2012		7/5/2013		2/25/2014		2/6/2015		5/27/2015		9/4/2015		11/20/2015	
Well ID	**Total Depth (ft bgs)**	**Diameter (inches)**	**Screened Interval[3] (ft bgs)**	**TOC Elevation[1,2] (ft)**	**Depth to Water (ft bTOC)**	**Groundwater Elevation (ft)**	**Depth to Water (ft bTOC)**	**Groundwater Elevation (ft)**	**Depth to Water (ft bTOC)**	**Groundwater Elevation (ft)**	**Depth to Water (ft bTOC)**	**Groundwater Elevation (ft)**	**Depth to Water (ft bTOC)**	**Groundwater Elevation (ft)**	**Depth to Water (ft bTOC)**	**Groundwater Elevation (ft)**	**Depth to Water (ft bTOC)**	**Groundwater Elevation (ft)**
MW-5	19.70	2	10-20	100.00	16.90	83.10	13.76	86.24	12.15	87.85	13.04	86.96	13.18	86.82	17.36	82.64	12.98	87.02
MW-10	20.40	2	8-18	99.24	17.78	81.46	13.05	86.19	12.72	86.52	13.64	85.60	14.34	84.90	18.32	80.92	13.33	85.91
MW-11	17.10	2	7-17	94.17	14.93	79.24	10.25	83.92	9.98	84.19	10.88	83.29	11.76	82.41	15.40	78.77	10.59	83.58
MW-12	19.65	2	8-18	96.89	15.23	81.66	10.23	86.66	10.55	86.34	11.39	85.50	11.33	85.56	15.82	81.07	11.53	85.36
MW-14	20.30	2	9-19	97.10	14.55	82.55	10.95	86.15	9.81	87.29	10.51	86.59	11.43	85.67	15.06	82.04	10.64	86.46

Notes:
1. Monitoring well top-of-casing elevations re-surveyed on March 12, 2010 due to wellhead repairs.
2. Elevations are referenced to an arbitrary datum of 100.00 ft established at MW-5.
3. Well depths based on 9/4/15 gauging event; screen intervals assumed to be 10 ft
TOC - Top of monitoring well casing
ft - Feet
bgs - below ground surface
bTOC - below top of monitoring well casing

Table 2
Summary of Groundwater Analytical Results
Former NC DOT Division 10 Maintenance Site
1119 East Sugar Creek Road
Charlotte, North Carolina
H&H Job No. DOT-513

Well ID	Sample Date	VOCs (µg/l)	
		Trichloroethene	cis-1,2-Dichloroethene
NC 2L Standard (µg/l)		3.0	70
MW-5	7/7/2010	2.0	5.4
	1/6/2011	1.6	5.1
	7/8/2011	1.2	5.3
	8/16/2012	0.93	3.5
	7/5/2013	1.0	3.1
	2/25/2014	0.81	2.8
	2/6/2015	<0.50	1.2
	5/27/2015	0.52	2.0
	9/4/2015	0.64	1.9
	11/20/2015	<0.50	0.67
MW-10	7/7/2010	0.94	<0.50
	1/6/2011	1.5	<0.50
	7/8/2011	<1.0	<1.0
	8/16/2012	0.72	<0.50
	7/5/2013	0.70	<0.50
	2/25/2014	0.58	<0.50
	2/6/2015	<0.50	<0.50
	5/27/2015	<0.50	<0.50
	9/4/2015	<0.50	<0.50
	11/20/2015	<0.50	<0.50
MW-11	7/7/2010	2.2	2.1
	1/6/2011	**4.7**	3.8
	7/8/2011	**5.4**	3.7
	8/16/2012	**5.1**	2.9
	7/5/2013	2.8	0.95
	2/25/2014	**3.4**	1.1
	2/6/2015	2.4	<0.50
	5/27/2015	2.5	<0.50
	9/4/2015	3.0	0.62
	11/20/2015	2.1	<0.50
MW-12	7/7/2010	2.1	<0.50
	1/6/2011	**11.0**	1.2
	7/8/2011	**9.5**	1.0
	8/16/2012	**3.2**	0.64
	7/5/2013	0.6	<0.50
	2/25/2014	2.5	<0.50
	2/6/2015	1.4	<0.50
	5/27/2015	2.0	<0.50
	9/4/2015	2.0	<0.50
	11/20/2015	<0.50	<0.50
MW-14	7/7/2010	1.4	<0.50
	1/6/2011	2.1	<0.50
	7/8/2011	1.5	<1.0
	8/16/2012	1.0	<0.50
	7/5/2013	0.96	<0.50
	2/25/2014	0.87	<0.50
	2/26/2015	0.59	<0.50
	5/27/2015	0.74	<0.50
	9/4/2015	0.54	<0.50
	11/20/2015	0.59	<0.50

Notes:
Only compounds detected in at least one sample shown in table.
VOCs = Volatile Organic Compounds; µg/l = micrograms per liter
Groundwater samples analyzed by EPA Method 6200B.
Bold indicates that analyte concentration exceeds the NC 2L Standard.



N

APPROXIMATE

0 2000 4000

SCALE IN FEET

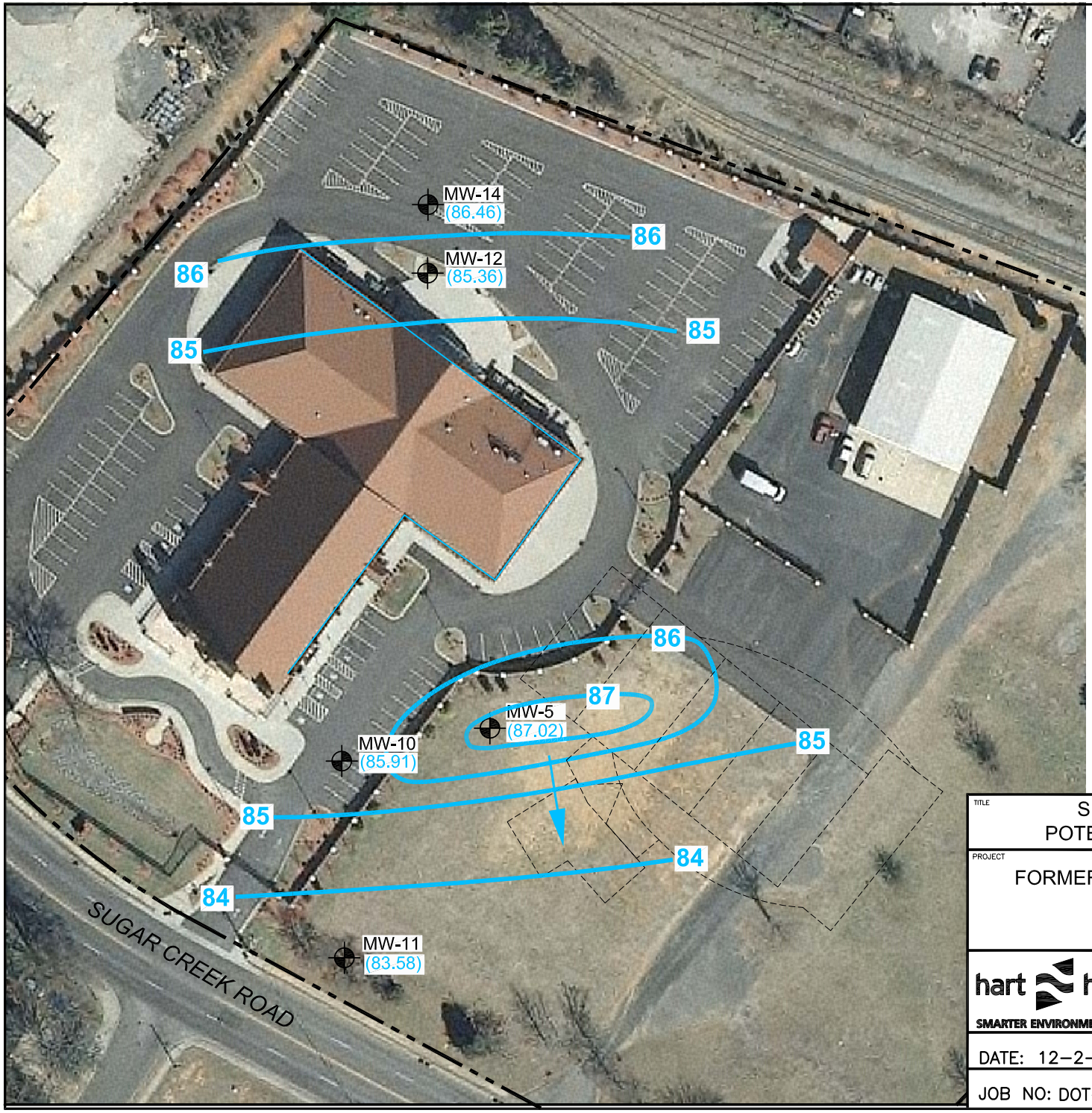
U.S.G.S. QUADRANGLE MAP

CHARLOTTE EAST, NC 1967
PHOTOREVISED 1988

QUADRANGLE
7.5 MINUTE SERIES (TOPOGRAPHIC)

TITLE	SITE LOCATION MAP
PROJECT	FORMER NC DOT DIVISION 10 FACILITY SUGAR CREEK ROAD CHARLOTTE, NORTH CAROLINA
hart hickman	2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007 (p) 704-586-0373 (f)

DATE:	12-2-15	REVISION NO:	0
JOB NO:	DOT-513	FIGURE NO:	1



LEGEND

- PROPERTY BOUNDARY
- FORMER DOT STRUCTURES
- GROUNDWATER MONITORING WELL
- (86.46) GROUNDWATER ELEVATION (FT)
- 84 APPROXIMATE WATER TABLE CONTOUR (11/20/15 DATA)
- GENERAL GROUNDWATER FLOW DIRECTION

N

APPROXIMATE
0 80 160
SCALE IN FEET

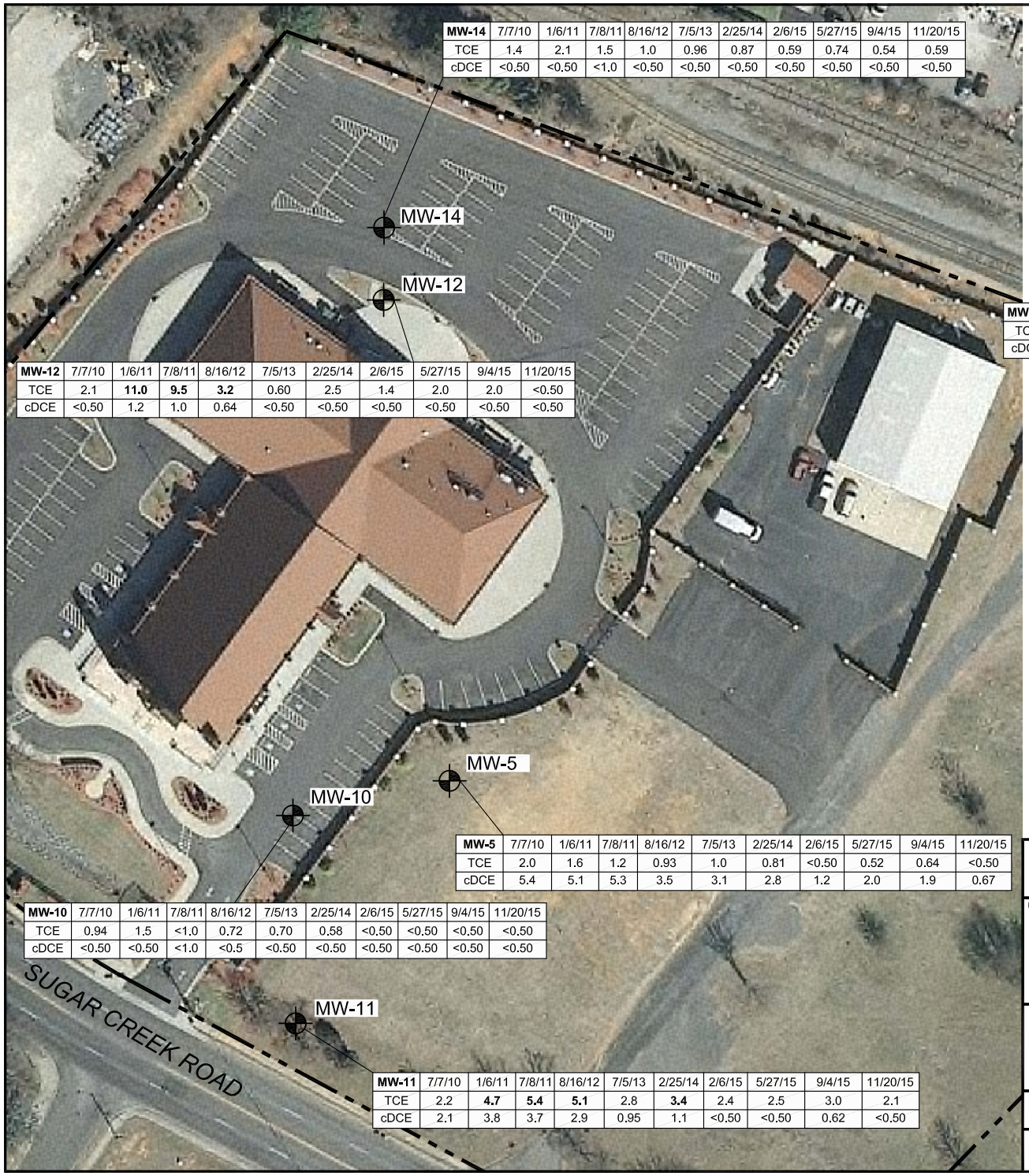
TITLE
SHALLOW GROUNDWATER POTENTIOMETRIC SURFACE MAP

PROJECT
FORMER NC DOT DIVISION 10 FACILITY
SUGAR CREEK ROAD
CHARLOTTE, NC

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS
2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)
License # C-1269 / #C-245 Geology

DATE: 12–2–15	REVISION NO. 0
JOB NO: DOT–513	FIGURE: 2

S:\AAA-Master Projects\NC DOT -DOT\DOT-500s Contract\DOT-513 Sugar Creek\GWM Reports\2015 Closure Report\GW SURFACE MAP_DOT-413.dwg, Fig 2, 3/24/2016 12:55:09 PM,



MW-14	7/7/10	1/6/11	7/8/11	8/16/12	7/5/13	2/25/14	2/6/15	5/27/15	9/4/15	11/20/15
TCE	1.4	2.1	1.5	1.0	0.96	0.87	0.59	0.74	0.54	0.59
cDCE	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

MW-12	7/7/10	1/6/11	7/8/11	8/16/12	7/5/13	2/25/14	2/6/15	5/27/15	9/4/15	11/20/15
TCE	2.1	**11.0**	**9.5**	**3.2**	0.60	2.5	1.4	2.0	2.0	<0.50
cDCE	<0.50	1.2	1.0	0.64	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

MW-5	7/7/10	1/6/11	7/8/11	8/16/12	7/5/13	2/25/14	2/6/15	5/27/15	9/4/15	11/20/15
TCE	2.0	1.6	1.2	0.93	1.0	0.81	<0.50	0.52	0.64	<0.50
cDCE	5.4	5.1	5.3	3.5	3.1	2.8	1.2	2.0	1.9	0.67

MW-10	7/7/10	1/6/11	7/8/11	8/16/12	7/5/13	2/25/14	2/6/15	5/27/15	9/4/15	11/20/15
TCE	0.94	1.5	<1.0	0.72	0.70	0.58	<0.50	<0.50	<0.50	<0.50
cDCE	<0.50	<0.50	<1.0	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

MW-11	7/7/10	1/6/11	7/8/11	8/16/12	7/5/13	2/25/14	2/6/15	5/27/15	9/4/15	11/20/15
TCE	2.2	**4.7**	**5.4**	**5.1**	2.8	**3.4**	2.4	2.5	3.0	2.1
cDCE	2.1	3.8	3.7	2.9	0.95	1.1	<0.50	<0.50	0.62	<0.50

LEGEND

PROPERTY BOUNDARY

GROUNDWATER MONITORING WELL

SAMPLE DATE

SAMPLE ID

MW-14	7/7/10	1/6/11	7/8/11	8/16/12	7/5/13	2/25/14	2/6/15	5/27/15	9/4/15	11/20/15
TCE	1.4	2.1	1.5	1.0	0.96	0.87	0.59	0.74	0.54	0.59
cDCE	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

CONCENTRATION (μg/L)

CONSTITUENT:
TCE = TRICHLOROETHENE
cDCE = cis-1,2-DICHLOROETHENE

BOLD INDICATES THAT ANALYTE CONCENTRATION EXCEEDS THE NC 2L STANDARD.

N

APPROXIMATE
0 80 160
SCALE IN FEET

TITLE

GROUNDWATER ANALYTICAL RESULTS

PROJECT

FORMER NC DOT DIVISION 10 FACILITY
SUGAR CREEK ROAD
CHARLOTTE, NC

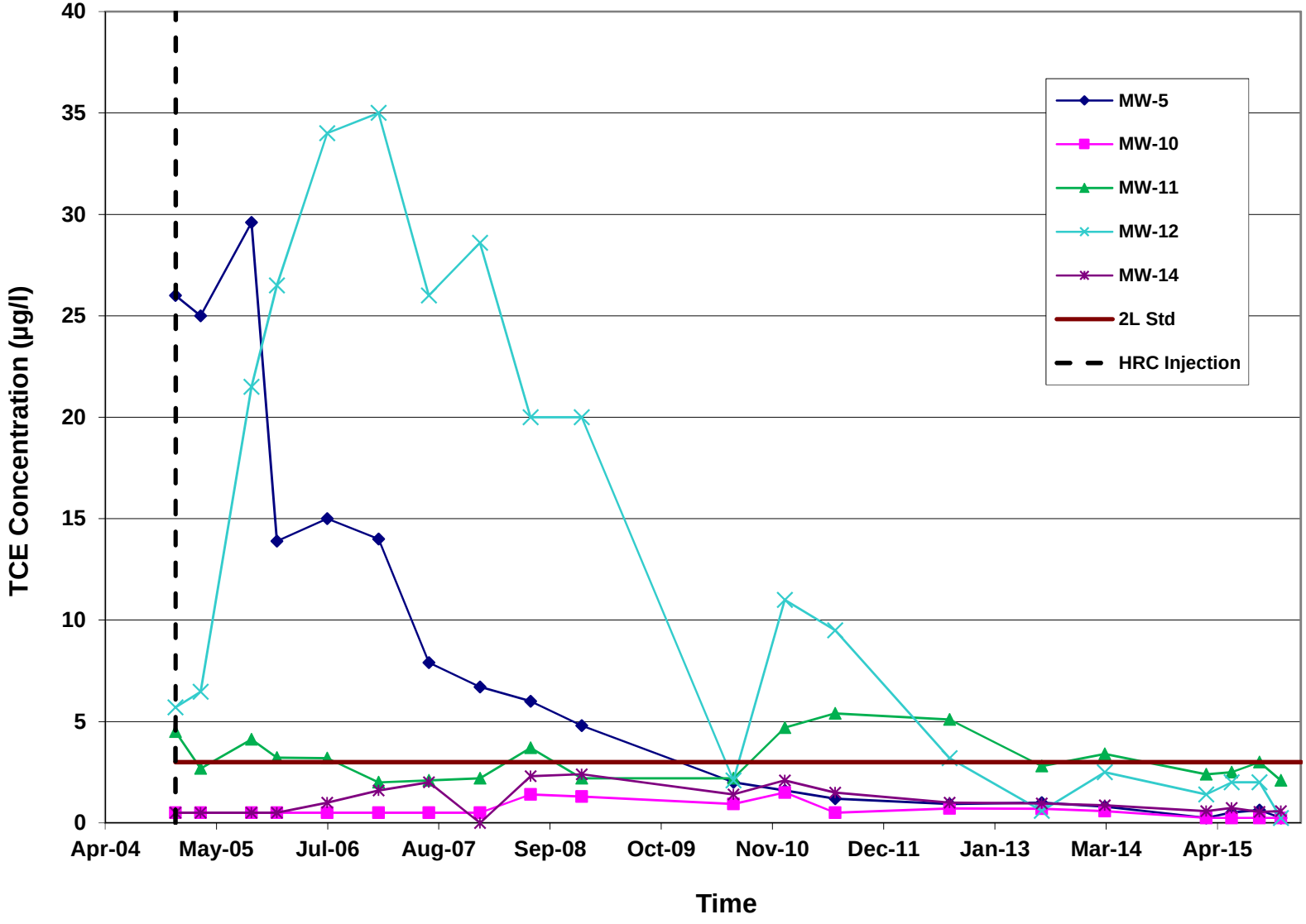
hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS
2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)
License # C-1269 / #C-245 Geology

DATE: 12–2–15 | REVISION NO.

JOB NO: DOT–513 | FIGURE: 3

S:\AAA-Master Projects\NC DOT -DOT\DOT-500s Contract\DOT-513 Sugar Creek\GWM Reports\2015 Closure Report\GW SURFACE MAP_DOT-413.dwg, Fig 3, 3/24/2016 12:54:13 PM,

Figure 4
TCE Concentrations vs Time After HRC Injection Event
Former NC DOT Division 10 Maintenance Site
Charlotte, North Carolina
H&H Job No. DOT-513



S:\AAA-Master Projects\NC DOT -DOT\DOT-500s Contract\DOT-513 Sugar Creek\GWM Reports\2015 Closure Report\GW Data Figure 4
3/24/2016

Appendix A

Historical Groundwater Data Summary

TABLE 3

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER DIVISION 10 MAINTENANCE FACILITY
CHARLOTTE, NORTH CAROLINA
EARTH TECH PROJECT NO. 45375

MW-5	15A NCAC 2L Standard	Oct-98	Jun-99	Oct-99	Apr-00	Oct-00	Apr-01	Oct-01	Apr-02	Oct-02	Apr-03	Oct-03	Apr-04	Oct-04	Jan-05	Apr-05	Oct-05	Jan-06	Jul-06	Jan-07	Jul-07	Jan-08	Jul-08	Jan-09
Trichloroethene	2.8	390	270	420	290	380	590	500	230	270	78	100	51	38	26	25	29.6	13.9	15	14	7.9	6.7	6	4.8
Chlorobenzene	50	BQL	31	28	26	30	6.6	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
cis-1,2-Dichloroethene	70	BQL	410	500	470	410	500	530	310	390	120	110	73	68	39	31.5	16.8	30.5	30	28	30	19.8	19	12
trans-1,2-Dichloroethene	70	BQL	BQL	BQL	BQL	2.7	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Vinyl Chloride	0.015	BQL	BQL	BQL	10	8.7	6.1	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
1,1-Dichloroethane	7	BQL	2	BQL	BQL	1.1	1.4	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
1,4-Dichlorobenzene	75	BQL	8	BQL	12	13	8.1	10	5.3	4.3	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
1,3-Dichlorobenzene	620	BQL	1	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
1,2-Dichlorobenzene	620	BQL	4	BQL	2.7	3.1	1.3	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
MW-10																								
Trichloroethene	2.8	6.3	BQL	6	2.9	4.6	5.3	10	1.9	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	1.4	1.3
1,1-Dichloroethene	7	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
1,2-Dichlorobenzene	620	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
MW-11																								
Trichloroethene	2.8	BQL	BQL	6.6	5.2	5.9	8.9	14	6.3	14	8.5	9.6	4.7	4.8	4.5	2.69	4.12	3.22	3.2	2	2.1	2.2	3.7	2.2
1,1,1-Trichloroethane	200	BQL	BQL	BQL	BQL	BQL	3.3	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Carbon Tetrachloride	0.3	BQL	BQL	BQL	1.5	2.2	BQL	BQL	BQL	2.4	1.3	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Chloroform	0.19	BQL	2	1.7	2.5	1.8	2.3	BQL	BQL	2.5	1.7	BQL	0.71	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
cis-1,2-Dichloroethene	70	BQL	1.5	2.1	1.6	2.1	BQL	5.7	BQL	9.1	5.5	2.6	3.2	3.8	2.5	BQL	3.65	2.24	4.4	3.2	4.6	4.0	6.5	3.3
1,1-Dichloroethene	7	5.5	3.6	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
1,2-Dichloroethane	0.38	BQL	BQL	3.9	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
1,2-Dichlorobenzene	620	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL		BQL	BQL	BQL	BQL	BQL	BQL	BQL
MW-12																								
Trichloroethene	2.8	22	20	20	26	25	68	NS	26	5.9	8.8	12	6.3	4.7	5.7	6.47	21.5	26.5	34	35	26	28.6	20	20
1,1-Dichloroethene	7	BQL	BQL	BQL	BQL	BQL	BQL	NS	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
1,2-Dichlorobenzene	620	BQL	BQL	BQL	BQL	BQL	BQL	NS	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
MW-14																								
Trichloroethene	2.8	20	14	20	10	9.9	32	NS	8.2	5.2	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	1	1.6	2	NS	2.3	2.4
1,2-Dichloroethene	0.38	BQL	BQL	BQL	BQL	BQL	1.2	NS	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	NS	BQL	BQL
1,1-Dichloroethene	7	BQL	BQL	BQL	BQL	BQL	BQL	NS	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	NS	BQL	BQL
1,2-Dichlorobenzene	620	BQL	BQL	BQL	BQL	BQL	BQL	NS	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	NS	BQL	BQL

BQL = Below Method Quantitation Limit
NS = Not Sampled
All concentrations are expressed as ug/L.
Shaded areas indicate that compound concentration is above the 15A NCAC 2L ground water quality standard

Appendix B

Laboratory Analytical Data

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

June 04, 2015

Chemical Testing Engineer
NCDOT
Materials & Tests Unit
1801 Blue Ridge Road
Raleigh, NC 27607

RE: Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Dear Chemical Engineer:
Enclosed are the analytical results for sample(s) received by the laboratory on May 27, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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SAMPLE ANALYTE COUNT

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92251681001	**MW-11**	SM 6200B	CAH	63	PASI-C
92251681002	**MW-5**	SM 6200B	CAH	63	PASI-C
92251681003	**MW-10**	SM 6200B	CAH	63	PASI-C
92251681004	**MW-12**	SM 6200B	CAH	63	PASI-C
92251681005	**MW-14**	SM 6200B	CAH	63	PASI-C
92251681006	**TRIP BLANK**	SM 6200B	CAH	63	PASI-C

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Sample: MW-11 **Lab ID: 92251681001** Collected: 05/27/15 10:20 Received: 05/27/15 16:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		06/03/15 05:40	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		06/03/15 05:40	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		06/03/15 05:40	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		06/03/15 05:40	75-27-4	
Bromoform	ND	ug/L	0.50	1		06/03/15 05:40	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/03/15 05:40	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		06/03/15 05:40	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		06/03/15 05:40	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		06/03/15 05:40	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		06/03/15 05:40	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		06/03/15 05:40	108-90-7	
Chloroethane	ND	ug/L	1.0	1		06/03/15 05:40	75-00-3	
Chloroform	ND	ug/L	0.50	1		06/03/15 05:40	67-66-3	
Chloromethane	ND	ug/L	1.0	1		06/03/15 05:40	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		06/03/15 05:40	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		06/03/15 05:40	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		06/03/15 05:40	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		06/03/15 05:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		06/03/15 05:40	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		06/03/15 05:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 05:40	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 05:40	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 05:40	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		06/03/15 05:40	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		06/03/15 05:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		06/03/15 05:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		06/03/15 05:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		06/03/15 05:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		06/03/15 05:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		06/03/15 05:40	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		06/03/15 05:40	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		06/03/15 05:40	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		06/03/15 05:40	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		06/03/15 05:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		06/03/15 05:40	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		06/03/15 05:40	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		06/03/15 05:40	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		06/03/15 05:40	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		06/03/15 05:40	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		06/03/15 05:40	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		06/03/15 05:40	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		06/03/15 05:40	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		06/03/15 05:40	103-65-1	
Styrene	ND	ug/L	0.50	1		06/03/15 05:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		06/03/15 05:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		06/03/15 05:40	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		06/03/15 05:40	127-18-4	

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(704)875-9092

ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Sample: MW-11 **Lab ID: 92251681001** Collected: 05/27/15 10:20 Received: 05/27/15 16:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		06/03/15 05:40	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		06/03/15 05:40	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		06/03/15 05:40	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		06/03/15 05:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		06/03/15 05:40	79-00-5	
Trichloroethene	**2.5**	ug/L	0.50	1		06/03/15 05:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		06/03/15 05:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		06/03/15 05:40	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		06/03/15 05:40	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		06/03/15 05:40	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		06/03/15 05:40	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		06/03/15 05:40	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		06/03/15 05:40	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		06/03/15 05:40	17060-07-0	
4-Bromofluorobenzene (S)	99	%	70-130	1		06/03/15 05:40	460-00-4	
Toluene-d8 (S)	101	%	70-130	1		06/03/15 05:40	2037-26-5	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Sample: MW-5 **Lab ID: 92251681002** Collected: 05/27/15 11:10 Received: 05/27/15 16:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		06/03/15 05:56	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		06/03/15 05:56	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		06/03/15 05:56	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		06/03/15 05:56	75-27-4	
Bromoform	ND	ug/L	0.50	1		06/03/15 05:56	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/03/15 05:56	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		06/03/15 05:56	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		06/03/15 05:56	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		06/03/15 05:56	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		06/03/15 05:56	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		06/03/15 05:56	108-90-7	
Chloroethane	ND	ug/L	1.0	1		06/03/15 05:56	75-00-3	
Chloroform	ND	ug/L	0.50	1		06/03/15 05:56	67-66-3	
Chloromethane	ND	ug/L	1.0	1		06/03/15 05:56	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		06/03/15 05:56	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		06/03/15 05:56	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		06/03/15 05:56	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		06/03/15 05:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		06/03/15 05:56	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		06/03/15 05:56	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 05:56	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 05:56	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 05:56	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		06/03/15 05:56	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		06/03/15 05:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		06/03/15 05:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		06/03/15 05:56	75-35-4	
cis-1,2-Dichloroethene	**2.0**	ug/L	0.50	1		06/03/15 05:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		06/03/15 05:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		06/03/15 05:56	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		06/03/15 05:56	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		06/03/15 05:56	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		06/03/15 05:56	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		06/03/15 05:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		06/03/15 05:56	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		06/03/15 05:56	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		06/03/15 05:56	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		06/03/15 05:56	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		06/03/15 05:56	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		06/03/15 05:56	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		06/03/15 05:56	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		06/03/15 05:56	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		06/03/15 05:56	103-65-1	
Styrene	ND	ug/L	0.50	1		06/03/15 05:56	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		06/03/15 05:56	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		06/03/15 05:56	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		06/03/15 05:56	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Sample: MW-5 **Lab ID: 92251681002** Collected: 05/27/15 11:10 Received: 05/27/15 16:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		06/03/15 05:56	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		06/03/15 05:56	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		06/03/15 05:56	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		06/03/15 05:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		06/03/15 05:56	79-00-5	
Trichloroethene	**0.52**	ug/L	0.50	1		06/03/15 05:56	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		06/03/15 05:56	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		06/03/15 05:56	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		06/03/15 05:56	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		06/03/15 05:56	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		06/03/15 05:56	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		06/03/15 05:56	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		06/03/15 05:56	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	96	%	70-130	1		06/03/15 05:56	17060-07-0	
4-Bromofluorobenzene (S)	99	%	70-130	1		06/03/15 05:56	460-00-4	
Toluene-d8 (S)	101	%	70-130	1		06/03/15 05:56	2037-26-5	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Sample: MW-10 **Lab ID: 92251681003** Collected: 05/27/15 11:50 Received: 05/27/15 16:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		06/03/15 06:13	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		06/03/15 06:13	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		06/03/15 06:13	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		06/03/15 06:13	75-27-4	
Bromoform	ND	ug/L	0.50	1		06/03/15 06:13	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/03/15 06:13	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		06/03/15 06:13	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		06/03/15 06:13	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		06/03/15 06:13	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		06/03/15 06:13	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		06/03/15 06:13	108-90-7	
Chloroethane	ND	ug/L	1.0	1		06/03/15 06:13	75-00-3	
Chloroform	ND	ug/L	0.50	1		06/03/15 06:13	67-66-3	
Chloromethane	ND	ug/L	1.0	1		06/03/15 06:13	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		06/03/15 06:13	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		06/03/15 06:13	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		06/03/15 06:13	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		06/03/15 06:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		06/03/15 06:13	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		06/03/15 06:13	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 06:13	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 06:13	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 06:13	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		06/03/15 06:13	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		06/03/15 06:13	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		06/03/15 06:13	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		06/03/15 06:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		06/03/15 06:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		06/03/15 06:13	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		06/03/15 06:13	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		06/03/15 06:13	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		06/03/15 06:13	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		06/03/15 06:13	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		06/03/15 06:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		06/03/15 06:13	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		06/03/15 06:13	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		06/03/15 06:13	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		06/03/15 06:13	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		06/03/15 06:13	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		06/03/15 06:13	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		06/03/15 06:13	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		06/03/15 06:13	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		06/03/15 06:13	103-65-1	
Styrene	ND	ug/L	0.50	1		06/03/15 06:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		06/03/15 06:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		06/03/15 06:13	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		06/03/15 06:13	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Sample: MW-10 **Lab ID: 92251681003** Collected: 05/27/15 11:50 Received: 05/27/15 16:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		06/03/15 06:13	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		06/03/15 06:13	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		06/03/15 06:13	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		06/03/15 06:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		06/03/15 06:13	79-00-5	
Trichloroethene	ND	ug/L	0.50	1		06/03/15 06:13	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		06/03/15 06:13	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		06/03/15 06:13	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		06/03/15 06:13	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		06/03/15 06:13	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		06/03/15 06:13	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		06/03/15 06:13	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		06/03/15 06:13	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		06/03/15 06:13	17060-07-0	
4-Bromofluorobenzene (S)	97	%	70-130	1		06/03/15 06:13	460-00-4	
Toluene-d8 (S)	102	%	70-130	1		06/03/15 06:13	2037-26-5	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Sample: MW-12 **Lab ID: 92251681004** Collected: 05/27/15 12:30 Received: 05/27/15 16:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		06/03/15 06:30	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		06/03/15 06:30	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		06/03/15 06:30	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		06/03/15 06:30	75-27-4	
Bromoform	ND	ug/L	0.50	1		06/03/15 06:30	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/03/15 06:30	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		06/03/15 06:30	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		06/03/15 06:30	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		06/03/15 06:30	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		06/03/15 06:30	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		06/03/15 06:30	108-90-7	
Chloroethane	ND	ug/L	1.0	1		06/03/15 06:30	75-00-3	
Chloroform	ND	ug/L	0.50	1		06/03/15 06:30	67-66-3	
Chloromethane	ND	ug/L	1.0	1		06/03/15 06:30	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		06/03/15 06:30	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		06/03/15 06:30	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		06/03/15 06:30	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		06/03/15 06:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		06/03/15 06:30	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		06/03/15 06:30	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 06:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 06:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 06:30	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		06/03/15 06:30	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		06/03/15 06:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		06/03/15 06:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		06/03/15 06:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		06/03/15 06:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		06/03/15 06:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		06/03/15 06:30	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		06/03/15 06:30	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		06/03/15 06:30	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		06/03/15 06:30	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		06/03/15 06:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		06/03/15 06:30	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		06/03/15 06:30	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		06/03/15 06:30	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		06/03/15 06:30	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		06/03/15 06:30	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		06/03/15 06:30	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		06/03/15 06:30	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		06/03/15 06:30	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		06/03/15 06:30	103-65-1	
Styrene	ND	ug/L	0.50	1		06/03/15 06:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		06/03/15 06:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		06/03/15 06:30	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		06/03/15 06:30	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Sample: MW-12 **Lab ID: 92251681004** Collected: 05/27/15 12:30 Received: 05/27/15 16:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		06/03/15 06:30	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		06/03/15 06:30	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		06/03/15 06:30	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		06/03/15 06:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		06/03/15 06:30	79-00-5	
Trichloroethene	**2.0**	ug/L	0.50	1		06/03/15 06:30	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		06/03/15 06:30	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		06/03/15 06:30	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		06/03/15 06:30	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		06/03/15 06:30	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		06/03/15 06:30	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		06/03/15 06:30	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		06/03/15 06:30	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		06/03/15 06:30	17060-07-0	
4-Bromofluorobenzene (S)	101	%	70-130	1		06/03/15 06:30	460-00-4	
Toluene-d8 (S)	101	%	70-130	1		06/03/15 06:30	2037-26-5	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Sample: MW-14 **Lab ID: 92251681005** Collected: 05/27/15 13:20 Received: 05/27/15 16:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		06/03/15 06:47	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		06/03/15 06:47	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		06/03/15 06:47	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		06/03/15 06:47	75-27-4	
Bromoform	ND	ug/L	0.50	1		06/03/15 06:47	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/03/15 06:47	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		06/03/15 06:47	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		06/03/15 06:47	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		06/03/15 06:47	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		06/03/15 06:47	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		06/03/15 06:47	108-90-7	
Chloroethane	ND	ug/L	1.0	1		06/03/15 06:47	75-00-3	
Chloroform	ND	ug/L	0.50	1		06/03/15 06:47	67-66-3	
Chloromethane	ND	ug/L	1.0	1		06/03/15 06:47	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		06/03/15 06:47	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		06/03/15 06:47	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		06/03/15 06:47	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		06/03/15 06:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		06/03/15 06:47	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		06/03/15 06:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 06:47	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 06:47	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 06:47	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		06/03/15 06:47	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		06/03/15 06:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		06/03/15 06:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		06/03/15 06:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		06/03/15 06:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		06/03/15 06:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		06/03/15 06:47	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		06/03/15 06:47	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		06/03/15 06:47	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		06/03/15 06:47	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		06/03/15 06:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		06/03/15 06:47	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		06/03/15 06:47	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		06/03/15 06:47	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		06/03/15 06:47	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		06/03/15 06:47	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		06/03/15 06:47	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		06/03/15 06:47	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		06/03/15 06:47	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		06/03/15 06:47	103-65-1	
Styrene	ND	ug/L	0.50	1		06/03/15 06:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		06/03/15 06:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		06/03/15 06:47	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		06/03/15 06:47	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Sample: MW-14 **Lab ID: 92251681005** Collected: 05/27/15 13:20 Received: 05/27/15 16:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		06/03/15 06:47	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		06/03/15 06:47	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		06/03/15 06:47	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		06/03/15 06:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		06/03/15 06:47	79-00-5	
Trichloroethene	**0.74**	ug/L	0.50	1		06/03/15 06:47	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		06/03/15 06:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		06/03/15 06:47	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		06/03/15 06:47	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		06/03/15 06:47	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		06/03/15 06:47	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		06/03/15 06:47	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		06/03/15 06:47	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		06/03/15 06:47	17060-07-0	
4-Bromofluorobenzene (S)	99	%	70-130	1		06/03/15 06:47	460-00-4	
Toluene-d8 (S)	99	%	70-130	1		06/03/15 06:47	2037-26-5	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Sample: TRIP BLANK **Lab ID: 92251681006** Collected: 05/27/15 00:00 Received: 05/27/15 16:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		06/03/15 07:04	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		06/03/15 07:04	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		06/03/15 07:04	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		06/03/15 07:04	75-27-4	
Bromoform	ND	ug/L	0.50	1		06/03/15 07:04	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/03/15 07:04	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		06/03/15 07:04	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		06/03/15 07:04	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		06/03/15 07:04	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		06/03/15 07:04	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		06/03/15 07:04	108-90-7	
Chloroethane	ND	ug/L	1.0	1		06/03/15 07:04	75-00-3	
Chloroform	ND	ug/L	0.50	1		06/03/15 07:04	67-66-3	
Chloromethane	ND	ug/L	1.0	1		06/03/15 07:04	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		06/03/15 07:04	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		06/03/15 07:04	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		06/03/15 07:04	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		06/03/15 07:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		06/03/15 07:04	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		06/03/15 07:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 07:04	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 07:04	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		06/03/15 07:04	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		06/03/15 07:04	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		06/03/15 07:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		06/03/15 07:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		06/03/15 07:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		06/03/15 07:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		06/03/15 07:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		06/03/15 07:04	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		06/03/15 07:04	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		06/03/15 07:04	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		06/03/15 07:04	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		06/03/15 07:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		06/03/15 07:04	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		06/03/15 07:04	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		06/03/15 07:04	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		06/03/15 07:04	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		06/03/15 07:04	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		06/03/15 07:04	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		06/03/15 07:04	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		06/03/15 07:04	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		06/03/15 07:04	103-65-1	
Styrene	ND	ug/L	0.50	1		06/03/15 07:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		06/03/15 07:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		06/03/15 07:04	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		06/03/15 07:04	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Sample: TRIP BLANK **Lab ID: 92251681006** Collected: 05/27/15 00:00 Received: 05/27/15 16:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		06/03/15 07:04	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		06/03/15 07:04	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		06/03/15 07:04	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		06/03/15 07:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		06/03/15 07:04	79-00-5	
Trichloroethene	ND	ug/L	0.50	1		06/03/15 07:04	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		06/03/15 07:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		06/03/15 07:04	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		06/03/15 07:04	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		06/03/15 07:04	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		06/03/15 07:04	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		06/03/15 07:04	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		06/03/15 07:04	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		06/03/15 07:04	17060-07-0	
4-Bromofluorobenzene (S)	101	%	70-130	1		06/03/15 07:04	460-00-4	
Toluene-d8 (S)	100	%	70-130	1		06/03/15 07:04	2037-26-5	

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QUALITY CONTROL DATA

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

QC Batch: MSV/31958 Analysis Method: SM 6200B
QC Batch Method: SM 6200B Analysis Description: 6200B MSV
Associated Lab Samples: 92251681001, 92251681002, 92251681003, 92251681004, 92251681005, 92251681006

METHOD BLANK: 1473198 Matrix: Water
Associated Lab Samples: 92251681001, 92251681002, 92251681003, 92251681004, 92251681005, 92251681006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	06/03/15 04:32	
1,1,1-Trichloroethane	ug/L	ND	0.50	06/03/15 04:32	
1,1,2,2-Tetrachloroethane	ug/L	ND	0.50	06/03/15 04:32	
1,1,2-Trichloroethane	ug/L	ND	0.50	06/03/15 04:32	
1,1-Dichloroethane	ug/L	ND	0.50	06/03/15 04:32	
1,1-Dichloroethene	ug/L	ND	0.50	06/03/15 04:32	
1,1-Dichloropropene	ug/L	ND	0.50	06/03/15 04:32	
1,2,3-Trichlorobenzene	ug/L	ND	2.0	06/03/15 04:32	
1,2,3-Trichloropropane	ug/L	ND	0.50	06/03/15 04:32	
1,2,4-Trichlorobenzene	ug/L	ND	2.0	06/03/15 04:32	
1,2,4-Trimethylbenzene	ug/L	ND	0.50	06/03/15 04:32	
1,2-Dibromo-3-chloropropane	ug/L	ND	1.0	06/03/15 04:32	
1,2-Dibromoethane (EDB)	ug/L	ND	0.50	06/03/15 04:32	
1,2-Dichlorobenzene	ug/L	ND	0.50	06/03/15 04:32	
1,2-Dichloroethane	ug/L	ND	0.50	06/03/15 04:32	
1,2-Dichloropropane	ug/L	ND	0.50	06/03/15 04:32	
1,3,5-Trimethylbenzene	ug/L	ND	0.50	06/03/15 04:32	
1,3-Dichlorobenzene	ug/L	ND	0.50	06/03/15 04:32	
1,3-Dichloropropane	ug/L	ND	0.50	06/03/15 04:32	
1,4-Dichlorobenzene	ug/L	ND	0.50	06/03/15 04:32	
2,2-Dichloropropane	ug/L	ND	0.50	06/03/15 04:32	
2-Chlorotoluene	ug/L	ND	0.50	06/03/15 04:32	
4-Chlorotoluene	ug/L	ND	0.50	06/03/15 04:32	
Benzene	ug/L	ND	0.50	06/03/15 04:32	
Bromobenzene	ug/L	ND	0.50	06/03/15 04:32	
Bromochloromethane	ug/L	ND	0.50	06/03/15 04:32	
Bromodichloromethane	ug/L	ND	0.50	06/03/15 04:32	
Bromoform	ug/L	ND	0.50	06/03/15 04:32	
Bromomethane	ug/L	ND	5.0	06/03/15 04:32	
Carbon tetrachloride	ug/L	ND	0.50	06/03/15 04:32	
Chlorobenzene	ug/L	ND	0.50	06/03/15 04:32	
Chloroethane	ug/L	ND	1.0	06/03/15 04:32	
Chloroform	ug/L	ND	0.50	06/03/15 04:32	
Chloromethane	ug/L	ND	1.0	06/03/15 04:32	
cis-1,2-Dichloroethene	ug/L	ND	0.50	06/03/15 04:32	
cis-1,3-Dichloropropene	ug/L	ND	0.50	06/03/15 04:32	
Dibromochloromethane	ug/L	ND	0.50	06/03/15 04:32	
Dibromomethane	ug/L	ND	0.50	06/03/15 04:32	
Dichlorodifluoromethane	ug/L	ND	0.50	06/03/15 04:32	
Diisopropyl ether	ug/L	ND	0.50	06/03/15 04:32	
Ethylbenzene	ug/L	ND	0.50	06/03/15 04:32	

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QUALITY CONTROL DATA

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

METHOD BLANK: 1473198 Matrix: Water
Associated Lab Samples: 92251681001, 92251681002, 92251681003, 92251681004, 92251681005, 92251681006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	2.0	06/03/15 04:32	
Isopropylbenzene (Cumene)	ug/L	ND	0.50	06/03/15 04:32	
m&p-Xylene	ug/L	ND	1.0	06/03/15 04:32	
Methyl-tert-butyl ether	ug/L	ND	0.50	06/03/15 04:32	
Methylene Chloride	ug/L	ND	2.0	06/03/15 04:32	
n-Butylbenzene	ug/L	ND	0.50	06/03/15 04:32	
n-Propylbenzene	ug/L	ND	0.50	06/03/15 04:32	
Naphthalene	ug/L	ND	2.0	06/03/15 04:32	
o-Xylene	ug/L	ND	0.50	06/03/15 04:32	
sec-Butylbenzene	ug/L	ND	0.50	06/03/15 04:32	
Styrene	ug/L	ND	0.50	06/03/15 04:32	
tert-Butylbenzene	ug/L	ND	0.50	06/03/15 04:32	
Tetrachloroethene	ug/L	ND	0.50	06/03/15 04:32	
Toluene	ug/L	ND	0.50	06/03/15 04:32	
trans-1,2-Dichloroethene	ug/L	ND	0.50	06/03/15 04:32	
trans-1,3-Dichloropropene	ug/L	ND	0.50	06/03/15 04:32	
Trichloroethene	ug/L	ND	0.50	06/03/15 04:32	
Trichlorofluoromethane	ug/L	ND	1.0	06/03/15 04:32	
Vinyl chloride	ug/L	ND	1.0	06/03/15 04:32	
1,2-Dichloroethane-d4 (S)	%	97	70-130	06/03/15 04:32	
4-Bromofluorobenzene (S)	%	101	70-130	06/03/15 04:32	
Toluene-d8 (S)	%	103	70-130	06/03/15 04:32	

LABORATORY CONTROL SAMPLE: 1473199

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	52.3	105	60-140	
1,1,1-Trichloroethane	ug/L	50	49.0	98	60-140	
1,1,2,2-Tetrachloroethane	ug/L	50	50.3	101	60-140	
1,1,2-Trichloroethane	ug/L	50	49.6	99	60-140	
1,1-Dichloroethane	ug/L	50	48.8	98	60-140	
1,1-Dichloroethene	ug/L	50	47.9	96	60-140	
1,1-Dichloropropene	ug/L	50	52.7	105	60-140	
1,2,3-Trichlorobenzene	ug/L	50	54.8	110	60-140	
1,2,3-Trichloropropane	ug/L	50	52.7	105	60-140	
1,2,4-Trichlorobenzene	ug/L	50	54.9	110	60-140	
1,2,4-Trimethylbenzene	ug/L	50	55.7	111	60-140	
1,2-Dibromo-3-chloropropane	ug/L	50	52.5	105	60-140	
1,2-Dibromoethane (EDB)	ug/L	50	51.1	102	60-140	
1,2-Dichlorobenzene	ug/L	50	55.7	111	60-140	
1,2-Dichloroethane	ug/L	50	45.4	91	60-140	
1,2-Dichloropropane	ug/L	50	49.2	98	60-140	
1,3,5-Trimethylbenzene	ug/L	50	56.6	113	60-140	
1,3-Dichlorobenzene	ug/L	50	53.8	108	60-140	

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QUALITY CONTROL DATA

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

LABORATORY CONTROL SAMPLE: 1473199

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichloropropane	ug/L	50	51.9	104	60-140	
1,4-Dichlorobenzene	ug/L	50	52.1	104	60-140	
2,2-Dichloropropane	ug/L	50	44.3	89	60-140	
2-Chlorotoluene	ug/L	50	55.9	112	60-140	
4-Chlorotoluene	ug/L	50	54.1	108	60-140	
Benzene	ug/L	50	50.2	100	60-140	
Bromobenzene	ug/L	50	50.8	102	60-140	
Bromochloromethane	ug/L	50	49.0	98	60-140	
Bromodichloromethane	ug/L	50	43.8	88	60-140	
Bromoform	ug/L	50	44.8	90	60-140	
Bromomethane	ug/L	50	51.7	103	60-140	
Carbon tetrachloride	ug/L	50	47.4	95	60-140	
Chlorobenzene	ug/L	50	53.2	106	60-140	
Chloroethane	ug/L	50	45.2	90	60-140	
Chloroform	ug/L	50	43.4	87	60-140	
Chloromethane	ug/L	50	49.3	99	60-140	
cis-1,2-Dichloroethene	ug/L	50	49.6	99	60-140	
cis-1,3-Dichloropropene	ug/L	50	48.3	97	60-140	
Dibromochloromethane	ug/L	50	46.4	93	60-140	
Dibromomethane	ug/L	50	47.2	94	60-140	
Dichlorodifluoromethane	ug/L	50	46.7	93	60-140	
Diisopropyl ether	ug/L	50	46.8	94	60-140	
Ethylbenzene	ug/L	50	52.3	105	60-140	
Hexachloro-1,3-butadiene	ug/L	50	58.2	116	60-140	
Isopropylbenzene (Cumene)	ug/L	50	57.6	115	60-140	
m&p-Xylene	ug/L	100	106	106	60-140	
Methyl-tert-butyl ether	ug/L	50	44.9	90	60-140	
Methylene Chloride	ug/L	50	51.6	103	60-140	
n-Butylbenzene	ug/L	50	55.3	111	60-140	
n-Propylbenzene	ug/L	50	53.9	108	60-140	
Naphthalene	ug/L	50	55.7	111	60-140	
o-Xylene	ug/L	50	52.4	105	60-140	
sec-Butylbenzene	ug/L	50	57.3	115	60-140	
Styrene	ug/L	50	56.5	113	60-140	
tert-Butylbenzene	ug/L	50	45.9	92	60-140	
Tetrachloroethene	ug/L	50	51.7	103	60-140	
Toluene	ug/L	50	49.4	99	60-140	
trans-1,2-Dichloroethene	ug/L	50	47.5	95	60-140	
trans-1,3-Dichloropropene	ug/L	50	49.1	98	60-140	
Trichloroethene	ug/L	50	48.7	97	60-140	
Trichlorofluoromethane	ug/L	50	46.5	93	60-140	
Vinyl chloride	ug/L	50	50.7	101	60-140	
1,2-Dichloroethane-d4 (S)	%			95	70-130	
4-Bromofluorobenzene (S)	%			104	70-130	
Toluene-d8 (S)	%			98	70-130	

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QUALITY CONTROL DATA

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1473200 1473201

Parameter	Units	92251235013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	21.4	21.6	107	108	60-140	1	
1,1,1-Trichloroethane	ug/L	ND	20	20	25.0	25.4	125	127	60-140	2	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	23.4	24.1	117	120	60-140	3	
1,1,2-Trichloroethane	ug/L	ND	20	20	23.0	23.3	115	116	60-140	1	
1,1-Dichloroethane	ug/L	ND	20	20	24.3	24.3	122	122	60-140	0	
1,1-Dichloroethene	ug/L	ND	20	20	26.0	26.0	130	130	60-140	0	
1,1-Dichloropropene	ug/L	ND	20	20	27.7	28.0	139	140	60-140	1	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	22.3	22.4	112	112	60-140	0	
1,2,3-Trichloropropane	ug/L	ND	20	20	24.3	24.2	121	121	60-140	0	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	22.7	23.1	113	115	60-140	2	
1,2,4-Trimethylbenzene	ug/L	ND	20	20	24.0	24.1	120	121	60-140	1	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	19.8	19.1	99	95	60-140	4	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	24.4	24.5	122	122	60-140	0	
1,2-Dichlorobenzene	ug/L	ND	20	20	22.8	22.9	114	115	60-140	1	
1,2-Dichloroethane	ug/L	ND	20	20	22.7	22.7	113	113	60-140	0	
1,2-Dichloropropane	ug/L	ND	20	20	23.1	23.5	115	118	60-140	2	
1,3,5-Trimethylbenzene	ug/L	ND	20	20	24.2	24.5	121	122	60-140	1	
1,3-Dichlorobenzene	ug/L	ND	20	20	22.4	22.7	112	114	60-140	2	
1,3-Dichloropropane	ug/L	ND	20	20	22.9	23.5	114	117	60-140	3	
1,4-Dichlorobenzene	ug/L	ND	20	20	22.5	22.3	113	111	60-140	1	
2,2-Dichloropropane	ug/L	ND	20	20	23.7	24.0	118	120	60-140	1	
2-Chlorotoluene	ug/L	ND	20	20	22.8	22.7	114	114	60-140	0	
4-Chlorotoluene	ug/L	ND	20	20	23.1	22.7	115	114	60-140	2	
Benzene	ug/L	ND	20	20	23.8	24.5	119	122	60-140	3	
Bromobenzene	ug/L	ND	20	20	24.2	24.6	121	123	60-140	1	
Bromochloromethane	ug/L	ND	20	20	23.7	23.8	118	119	60-140	0	
Bromodichloromethane	ug/L	ND	20	20	19.8	20.3	99	102	60-140	3	
Bromoform	ug/L	ND	20	20	16.8	17.2	84	86	60-140	2	
Bromomethane	ug/L	ND	20	20	19.6	22.2	98	111	60-140	12	
Carbon tetrachloride	ug/L	ND	20	20	23.4	24.7	117	124	60-140	6	
Chlorobenzene	ug/L	ND	20	20	22.4	22.6	112	113	60-140	1	
Chloroethane	ug/L	ND	20	20	26.0	25.7	130	129	60-140	1	
Chloroform	ug/L	ND	20	20	22.2	22.2	110	110	60-140	0	
Chloromethane	ug/L	ND	20	20	28.5	29.4	143	147	60-140	3	M1
cis-1,2-Dichloroethene	ug/L	ND	20	20	24.0	24.3	120	122	60-140	1	
cis-1,3-Dichloropropene	ug/L	ND	20	20	22.5	23.3	113	116	60-140	3	
Dibromochloromethane	ug/L	ND	20	20	18.7	19.6	94	98	60-140	5	
Dibromomethane	ug/L	ND	20	20	22.3	22.2	111	111	60-140	1	
Dichlorodifluoromethane	ug/L	ND	20	20	30.1	30.0	150	150	60-140	0	M1
Diisopropyl ether	ug/L	ND	20	20	23.4	23.7	117	119	60-140	1	
Ethylbenzene	ug/L	ND	20	20	24.4	24.8	122	124	60-140	2	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	30.4	31.0	152	155	60-140	2	M1
Isopropylbenzene (Cumene)	ug/L	ND	20	20	26.3	27.1	131	135	60-140	3	
m&p-Xylene	ug/L	ND	40	40	48.4	49.4	121	123	60-140	2	
Methyl-tert-butyl ether	ug/L	ND	20	20	23.0	23.4	115	117	60-140	2	
Methylene Chloride	ug/L	ND	20	20	23.1	23.7	115	119	60-140	3	

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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(704)875-9092

QUALITY CONTROL DATA

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1473200 1473201

Parameter	Units	92251235013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
n-Butylbenzene	ug/L	ND	20	20	24.7	25.8	124	129	60-140	4	
n-Propylbenzene	ug/L	ND	20	20	24.7	24.7	123	124	60-140	0	
Naphthalene	ug/L	ND	20	20	23.2	23.1	116	115	60-140	1	
o-Xylene	ug/L	ND	20	20	24.0	24.2	120	121	60-140	1	
sec-Butylbenzene	ug/L	ND	20	20	26.4	27.5	132	138	60-140	4	
Styrene	ug/L	ND	20	20	24.0	24.5	120	123	60-140	2	
tert-Butylbenzene	ug/L	ND	20	20	21.3	21.6	106	108	60-140	2	
Tetrachloroethene	ug/L	ND	20	20	24.3	24.5	122	123	60-140	1	
Toluene	ug/L	ND	20	20	23.1	23.8	115	119	60-140	3	
trans-1,2-Dichloroethene	ug/L	ND	20	20	24.6	25.0	123	125	60-140	1	
trans-1,3-Dichloropropene	ug/L	ND	20	20	22.4	23.2	112	116	60-140	3	
Trichloroethene	ug/L	ND	20	20	23.0	23.2	115	116	60-140	1	
Trichlorofluoromethane	ug/L	ND	20	20	28.2	28.8	141	144	60-140	2	M1
Vinyl chloride	ug/L	ND	20	20	27.6	27.8	138	139	60-140	1	
1,2-Dichloroethane-d4 (S)	%						100	99	70-130		
4-Bromofluorobenzene (S)	%						101	103	70-130		
Toluene-d8 (S)	%						101	101	70-130		

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QUALIFIERS

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: DOT-513 34613.1.61
Pace Project No.: 92251681

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92251681001	**MW-11**	SM 6200B	MSV/31958		
92251681002	**MW-5**	SM 6200B	MSV/31958		
92251681003	**MW-10**	SM 6200B	MSV/31958		
92251681004	**MW-12**	SM 6200B	MSV/31958		
92251681005	**MW-14**	SM 6200B	MSV/31958		
92251681006	**TRIP BLANK**	SM 6200B	MSV/31958		

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Pace Analytical®	Sample Condition Upon Receipt (SCUR)	Page 1 of 2*
	Document Number: F-CHR-CS-003-rev.16	Issuing Authority: Pace Huntersville Quality Office

Client Name: Hart + Hickman

* Page 2 of 2 is for Internal Use Only

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ (Pace) Other_____

Optional: Proj. Due Date: Proj. Name:

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other_____

Thermometer Used: IR Gun T1401 Type of Ice: (Wet) Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

Corrected Cooler Temp.: 23 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: PP 5.27.15

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☒No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: H2O	☑Yes ☐No ☐N/A	12.
All containers needing preservation have been checked.	☐Yes ☐No ☒N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	
Samples checked for dechlorination:	☐Yes ☐No ☒N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15. PP 5.27.15
Trip Blank Present:	☑Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):_____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: [initials] Date: 5/27/15

SRF Review: [initials] Date: 5/28/15

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

WO#: 92251681

92251681

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

1905793

Section A Required Client Information:

Company: Hart & Hickman, PC
Address: 2923 S Tryon St, Ste 100
Charlotte, NC 28203
Email To: jallmno@hanthickman.com
Phone: 704-586-0007 Fax: —
Requested Due Date/TAT: standard

Section B Required Project Information:

Report To: Jeff Allmno
Copy To:
Purchase Order No.:
Project Name: DOT Sugar Creek
Project Number: DOT-513

Section C Invoice Information:

Attention: NC DOT
Company Name:
Address:
Pace Quote Reference: WBS# 34613.1.61
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: NC

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): 6200B 6230D	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. (92251681)
1	MW-11					5/27/15	1030		4				4					X		001
2	MW-5						1110											X		2
3	MW-10						1150											X		3
4	MW-12						1230											X		4
5	MW-14						1330											X		5
6	Trip Blank						—		2				2					X		6
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature] H+H	5/27/15	14:50	B Moody / Pace	05-27-15	14:50				
	B Moody	05-27-15	16:25	Tom Phillips HVL	5.27	16:25	2.3	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Brandt Kaysen

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 5/27/15

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.

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

September 10, 2015

Chemical Testing Engineer
NCDOT
Materials & Tests Unit
1801 Blue Ridge Road
Raleigh, NC 27607

RE: Project: DOT-513 34613.1.61
Pace Project No.: 92266486

Dear Chemical Engineer:
Enclosed are the analytical results for sample(s) received by the laboratory on September 04, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project:	DOT-513 34613.1.61
Pace Project No.:	92266486

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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SAMPLE ANALYTE COUNT

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92266486001	**MW-11**	SM 6200B	CAH	63	PASI-C
92266486002	**MW-5**	SM 6200B	CAH	63	PASI-C
92266486003	**MW-10**	SM 6200B	CAH	63	PASI-C
92266486004	**MW-12**	SM 6200B	CAH	63	PASI-C
92266486005	**MW-14**	SM 6200B	CAH	63	PASI-C
92266486006	**TRIP BLANK**	SM 6200B	CAH	63	PASI-C

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

Sample: MW-11 **Lab ID: 92266486001** Collected: 09/04/15 12:40 Received: 09/04/15 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		09/09/15 19:06	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		09/09/15 19:06	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		09/09/15 19:06	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		09/09/15 19:06	75-27-4	
Bromoform	ND	ug/L	0.50	1		09/09/15 19:06	75-25-2	
Bromomethane	ND	ug/L	5.0	1		09/09/15 19:06	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		09/09/15 19:06	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		09/09/15 19:06	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		09/09/15 19:06	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		09/09/15 19:06	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		09/09/15 19:06	108-90-7	
Chloroethane	ND	ug/L	1.0	1		09/09/15 19:06	75-00-3	
Chloroform	ND	ug/L	0.50	1		09/09/15 19:06	67-66-3	
Chloromethane	ND	ug/L	1.0	1		09/09/15 19:06	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		09/09/15 19:06	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		09/09/15 19:06	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		09/09/15 19:06	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		09/09/15 19:06	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		09/09/15 19:06	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		09/09/15 19:06	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 19:06	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 19:06	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 19:06	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		09/09/15 19:06	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		09/09/15 19:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		09/09/15 19:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		09/09/15 19:06	75-35-4	
cis-1,2-Dichloroethene	**0.62**	ug/L	0.50	1		09/09/15 19:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		09/09/15 19:06	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		09/09/15 19:06	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		09/09/15 19:06	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		09/09/15 19:06	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		09/09/15 19:06	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		09/09/15 19:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		09/09/15 19:06	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		09/09/15 19:06	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		09/09/15 19:06	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		09/09/15 19:06	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		09/09/15 19:06	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		09/09/15 19:06	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		09/09/15 19:06	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		09/09/15 19:06	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		09/09/15 19:06	103-65-1	
Styrene	ND	ug/L	0.50	1		09/09/15 19:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		09/09/15 19:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		09/09/15 19:06	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		09/09/15 19:06	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

Sample: MW-11 **Lab ID: 92266486001** Collected: 09/04/15 12:40 Received: 09/04/15 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		09/09/15 19:06	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		09/09/15 19:06	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		09/09/15 19:06	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		09/09/15 19:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		09/09/15 19:06	79-00-5	
Trichloroethene	**3.0**	ug/L	0.50	1		09/09/15 19:06	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		09/09/15 19:06	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		09/09/15 19:06	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		09/09/15 19:06	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		09/09/15 19:06	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		09/09/15 19:06	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		09/09/15 19:06	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		09/09/15 19:06	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		09/09/15 19:06	17060-07-0	
4-Bromofluorobenzene (S)	96	%	70-130	1		09/09/15 19:06	460-00-4	
Toluene-d8 (S)	101	%	70-130	1		09/09/15 19:06	2037-26-5	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

Sample: MW-5 **Lab ID: 92266486002** Collected: 09/04/15 11:45 Received: 09/04/15 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		09/09/15 19:23	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		09/09/15 19:23	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		09/09/15 19:23	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		09/09/15 19:23	75-27-4	
Bromoform	ND	ug/L	0.50	1		09/09/15 19:23	75-25-2	
Bromomethane	ND	ug/L	5.0	1		09/09/15 19:23	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		09/09/15 19:23	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		09/09/15 19:23	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		09/09/15 19:23	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		09/09/15 19:23	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		09/09/15 19:23	108-90-7	
Chloroethane	ND	ug/L	1.0	1		09/09/15 19:23	75-00-3	
Chloroform	ND	ug/L	0.50	1		09/09/15 19:23	67-66-3	
Chloromethane	ND	ug/L	1.0	1		09/09/15 19:23	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		09/09/15 19:23	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		09/09/15 19:23	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		09/09/15 19:23	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		09/09/15 19:23	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		09/09/15 19:23	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		09/09/15 19:23	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 19:23	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 19:23	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 19:23	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		09/09/15 19:23	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		09/09/15 19:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		09/09/15 19:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		09/09/15 19:23	75-35-4	
cis-1,2-Dichloroethene	**1.9**	ug/L	0.50	1		09/09/15 19:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		09/09/15 19:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		09/09/15 19:23	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		09/09/15 19:23	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		09/09/15 19:23	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		09/09/15 19:23	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		09/09/15 19:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		09/09/15 19:23	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		09/09/15 19:23	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		09/09/15 19:23	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		09/09/15 19:23	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		09/09/15 19:23	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		09/09/15 19:23	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		09/09/15 19:23	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		09/09/15 19:23	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		09/09/15 19:23	103-65-1	
Styrene	ND	ug/L	0.50	1		09/09/15 19:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		09/09/15 19:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		09/09/15 19:23	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		09/09/15 19:23	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

Sample: MW-5 **Lab ID: 92266486002** Collected: 09/04/15 11:45 Received: 09/04/15 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		09/09/15 19:23	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		09/09/15 19:23	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		09/09/15 19:23	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		09/09/15 19:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		09/09/15 19:23	79-00-5	
Trichloroethene	**0.64**	ug/L	0.50	1		09/09/15 19:23	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		09/09/15 19:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		09/09/15 19:23	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		09/09/15 19:23	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		09/09/15 19:23	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		09/09/15 19:23	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		09/09/15 19:23	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		09/09/15 19:23	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	97	%	70-130	1		09/09/15 19:23	17060-07-0	
4-Bromofluorobenzene (S)	97	%	70-130	1		09/09/15 19:23	460-00-4	
Toluene-d8 (S)	100	%	70-130	1		09/09/15 19:23	2037-26-5	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

Sample: MW-10 **Lab ID: 92266486003** Collected: 09/04/15 13:10 Received: 09/04/15 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		09/09/15 19:40	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		09/09/15 19:40	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		09/09/15 19:40	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		09/09/15 19:40	75-27-4	
Bromoform	ND	ug/L	0.50	1		09/09/15 19:40	75-25-2	
Bromomethane	ND	ug/L	5.0	1		09/09/15 19:40	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		09/09/15 19:40	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		09/09/15 19:40	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		09/09/15 19:40	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		09/09/15 19:40	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		09/09/15 19:40	108-90-7	
Chloroethane	ND	ug/L	1.0	1		09/09/15 19:40	75-00-3	
Chloroform	ND	ug/L	0.50	1		09/09/15 19:40	67-66-3	
Chloromethane	ND	ug/L	1.0	1		09/09/15 19:40	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		09/09/15 19:40	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		09/09/15 19:40	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		09/09/15 19:40	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		09/09/15 19:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		09/09/15 19:40	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		09/09/15 19:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 19:40	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 19:40	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 19:40	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		09/09/15 19:40	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		09/09/15 19:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		09/09/15 19:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		09/09/15 19:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		09/09/15 19:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		09/09/15 19:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		09/09/15 19:40	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		09/09/15 19:40	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		09/09/15 19:40	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		09/09/15 19:40	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		09/09/15 19:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		09/09/15 19:40	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		09/09/15 19:40	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		09/09/15 19:40	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		09/09/15 19:40	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		09/09/15 19:40	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		09/09/15 19:40	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		09/09/15 19:40	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		09/09/15 19:40	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		09/09/15 19:40	103-65-1	
Styrene	ND	ug/L	0.50	1		09/09/15 19:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		09/09/15 19:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		09/09/15 19:40	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		09/09/15 19:40	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

Sample: MW-10 **Lab ID: 92266486003** Collected: 09/04/15 13:10 Received: 09/04/15 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		09/09/15 19:40	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		09/09/15 19:40	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		09/09/15 19:40	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		09/09/15 19:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		09/09/15 19:40	79-00-5	
Trichloroethene	ND	ug/L	0.50	1		09/09/15 19:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		09/09/15 19:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		09/09/15 19:40	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		09/09/15 19:40	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		09/09/15 19:40	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		09/09/15 19:40	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		09/09/15 19:40	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		09/09/15 19:40	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		09/09/15 19:40	17060-07-0	
4-Bromofluorobenzene (S)	96	%	70-130	1		09/09/15 19:40	460-00-4	
Toluene-d8 (S)	102	%	70-130	1		09/09/15 19:40	2037-26-5	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

Sample: MW-12 **Lab ID: 92266486004** Collected: 09/04/15 14:30 Received: 09/04/15 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		09/09/15 19:56	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		09/09/15 19:56	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		09/09/15 19:56	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		09/09/15 19:56	75-27-4	
Bromoform	ND	ug/L	0.50	1		09/09/15 19:56	75-25-2	
Bromomethane	ND	ug/L	5.0	1		09/09/15 19:56	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		09/09/15 19:56	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		09/09/15 19:56	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		09/09/15 19:56	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		09/09/15 19:56	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		09/09/15 19:56	108-90-7	
Chloroethane	ND	ug/L	1.0	1		09/09/15 19:56	75-00-3	
Chloroform	ND	ug/L	0.50	1		09/09/15 19:56	67-66-3	
Chloromethane	ND	ug/L	1.0	1		09/09/15 19:56	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		09/09/15 19:56	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		09/09/15 19:56	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		09/09/15 19:56	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		09/09/15 19:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		09/09/15 19:56	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		09/09/15 19:56	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 19:56	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 19:56	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 19:56	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		09/09/15 19:56	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		09/09/15 19:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		09/09/15 19:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		09/09/15 19:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		09/09/15 19:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		09/09/15 19:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		09/09/15 19:56	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		09/09/15 19:56	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		09/09/15 19:56	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		09/09/15 19:56	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		09/09/15 19:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		09/09/15 19:56	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		09/09/15 19:56	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		09/09/15 19:56	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		09/09/15 19:56	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		09/09/15 19:56	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		09/09/15 19:56	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		09/09/15 19:56	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		09/09/15 19:56	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		09/09/15 19:56	103-65-1	
Styrene	ND	ug/L	0.50	1		09/09/15 19:56	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		09/09/15 19:56	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		09/09/15 19:56	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		09/09/15 19:56	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

Sample: MW-12 **Lab ID: 92266486004** Collected: 09/04/15 14:30 Received: 09/04/15 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		09/09/15 19:56	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		09/09/15 19:56	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		09/09/15 19:56	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		09/09/15 19:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		09/09/15 19:56	79-00-5	
Trichloroethene	**2.0**	ug/L	0.50	1		09/09/15 19:56	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		09/09/15 19:56	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		09/09/15 19:56	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		09/09/15 19:56	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		09/09/15 19:56	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		09/09/15 19:56	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		09/09/15 19:56	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		09/09/15 19:56	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%	70-130	1		09/09/15 19:56	17060-07-0	
4-Bromofluorobenzene (S)	97	%	70-130	1		09/09/15 19:56	460-00-4	
Toluene-d8 (S)	101	%	70-130	1		09/09/15 19:56	2037-26-5	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

Sample: MW-14 **Lab ID: 92266486005** Collected: 09/04/15 13:50 Received: 09/04/15 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		09/09/15 20:13	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		09/09/15 20:13	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		09/09/15 20:13	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		09/09/15 20:13	75-27-4	
Bromoform	ND	ug/L	0.50	1		09/09/15 20:13	75-25-2	
Bromomethane	ND	ug/L	5.0	1		09/09/15 20:13	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		09/09/15 20:13	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		09/09/15 20:13	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		09/09/15 20:13	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		09/09/15 20:13	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		09/09/15 20:13	108-90-7	
Chloroethane	ND	ug/L	1.0	1		09/09/15 20:13	75-00-3	
Chloroform	ND	ug/L	0.50	1		09/09/15 20:13	67-66-3	
Chloromethane	ND	ug/L	1.0	1		09/09/15 20:13	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		09/09/15 20:13	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		09/09/15 20:13	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		09/09/15 20:13	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		09/09/15 20:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		09/09/15 20:13	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		09/09/15 20:13	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 20:13	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 20:13	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 20:13	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		09/09/15 20:13	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		09/09/15 20:13	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		09/09/15 20:13	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		09/09/15 20:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		09/09/15 20:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		09/09/15 20:13	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		09/09/15 20:13	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		09/09/15 20:13	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		09/09/15 20:13	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		09/09/15 20:13	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		09/09/15 20:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		09/09/15 20:13	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		09/09/15 20:13	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		09/09/15 20:13	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		09/09/15 20:13	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		09/09/15 20:13	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		09/09/15 20:13	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		09/09/15 20:13	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		09/09/15 20:13	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		09/09/15 20:13	103-65-1	
Styrene	ND	ug/L	0.50	1		09/09/15 20:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		09/09/15 20:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		09/09/15 20:13	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		09/09/15 20:13	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

Sample: MW-14 **Lab ID: 92266486005** Collected: 09/04/15 13:50 Received: 09/04/15 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		09/09/15 20:13	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		09/09/15 20:13	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		09/09/15 20:13	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		09/09/15 20:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		09/09/15 20:13	79-00-5	
Trichloroethene	**0.54**	ug/L	0.50	1		09/09/15 20:13	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		09/09/15 20:13	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		09/09/15 20:13	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		09/09/15 20:13	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		09/09/15 20:13	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		09/09/15 20:13	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		09/09/15 20:13	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		09/09/15 20:13	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		09/09/15 20:13	17060-07-0	
4-Bromofluorobenzene (S)	97	%	70-130	1		09/09/15 20:13	460-00-4	
Toluene-d8 (S)	100	%	70-130	1		09/09/15 20:13	2037-26-5	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

Sample: TRIP BLANK **Lab ID: 92266486006** Collected: 09/04/15 00:00 Received: 09/04/15 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		09/09/15 20:29	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		09/09/15 20:29	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		09/09/15 20:29	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		09/09/15 20:29	75-27-4	
Bromoform	ND	ug/L	0.50	1		09/09/15 20:29	75-25-2	
Bromomethane	ND	ug/L	5.0	1		09/09/15 20:29	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		09/09/15 20:29	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		09/09/15 20:29	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		09/09/15 20:29	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		09/09/15 20:29	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		09/09/15 20:29	108-90-7	
Chloroethane	ND	ug/L	1.0	1		09/09/15 20:29	75-00-3	
Chloroform	ND	ug/L	0.50	1		09/09/15 20:29	67-66-3	
Chloromethane	ND	ug/L	1.0	1		09/09/15 20:29	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		09/09/15 20:29	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		09/09/15 20:29	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		09/09/15 20:29	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		09/09/15 20:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		09/09/15 20:29	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		09/09/15 20:29	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 20:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 20:29	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		09/09/15 20:29	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		09/09/15 20:29	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		09/09/15 20:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		09/09/15 20:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		09/09/15 20:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		09/09/15 20:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		09/09/15 20:29	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		09/09/15 20:29	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		09/09/15 20:29	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		09/09/15 20:29	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		09/09/15 20:29	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		09/09/15 20:29	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		09/09/15 20:29	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		09/09/15 20:29	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		09/09/15 20:29	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		09/09/15 20:29	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		09/09/15 20:29	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		09/09/15 20:29	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		09/09/15 20:29	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		09/09/15 20:29	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		09/09/15 20:29	103-65-1	
Styrene	ND	ug/L	0.50	1		09/09/15 20:29	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		09/09/15 20:29	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		09/09/15 20:29	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		09/09/15 20:29	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

Sample: TRIP BLANK **Lab ID: 92266486006** Collected: 09/04/15 00:00 Received: 09/04/15 15:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		09/09/15 20:29	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		09/09/15 20:29	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		09/09/15 20:29	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		09/09/15 20:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		09/09/15 20:29	79-00-5	
Trichloroethene	ND	ug/L	0.50	1		09/09/15 20:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		09/09/15 20:29	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		09/09/15 20:29	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		09/09/15 20:29	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		09/09/15 20:29	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		09/09/15 20:29	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		09/09/15 20:29	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		09/09/15 20:29	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	96	%	70-130	1		09/09/15 20:29	17060-07-0	
4-Bromofluorobenzene (S)	97	%	70-130	1		09/09/15 20:29	460-00-4	
Toluene-d8 (S)	99	%	70-130	1		09/09/15 20:29	2037-26-5	

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QUALITY CONTROL DATA

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

QC Batch: MSV/33301 Analysis Method: SM 6200B
QC Batch Method: SM 6200B Analysis Description: 6200B MSV
Associated Lab Samples: 92266486001, 92266486002, 92266486003, 92266486004, 92266486005, 92266486006

METHOD BLANK: 1551773 Matrix: Water
Associated Lab Samples: 92266486001, 92266486002, 92266486003, 92266486004, 92266486005, 92266486006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	09/09/15 18:50	
1,1,1-Trichloroethane	ug/L	ND	0.50	09/09/15 18:50	
1,1,2,2-Tetrachloroethane	ug/L	ND	0.50	09/09/15 18:50	
1,1,2-Trichloroethane	ug/L	ND	0.50	09/09/15 18:50	
1,1-Dichloroethane	ug/L	ND	0.50	09/09/15 18:50	
1,1-Dichloroethene	ug/L	ND	0.50	09/09/15 18:50	
1,1-Dichloropropene	ug/L	ND	0.50	09/09/15 18:50	
1,2,3-Trichlorobenzene	ug/L	ND	2.0	09/09/15 18:50	
1,2,3-Trichloropropane	ug/L	ND	0.50	09/09/15 18:50	
1,2,4-Trichlorobenzene	ug/L	ND	2.0	09/09/15 18:50	
1,2,4-Trimethylbenzene	ug/L	ND	0.50	09/09/15 18:50	
1,2-Dibromo-3-chloropropane	ug/L	ND	1.0	09/09/15 18:50	
1,2-Dibromoethane (EDB)	ug/L	ND	0.50	09/09/15 18:50	
1,2-Dichlorobenzene	ug/L	ND	0.50	09/09/15 18:50	
1,2-Dichloroethane	ug/L	ND	0.50	09/09/15 18:50	
1,2-Dichloropropane	ug/L	ND	0.50	09/09/15 18:50	
1,3,5-Trimethylbenzene	ug/L	ND	0.50	09/09/15 18:50	
1,3-Dichlorobenzene	ug/L	ND	0.50	09/09/15 18:50	
1,3-Dichloropropane	ug/L	ND	0.50	09/09/15 18:50	
1,4-Dichlorobenzene	ug/L	ND	0.50	09/09/15 18:50	
2,2-Dichloropropane	ug/L	ND	0.50	09/09/15 18:50	
2-Chlorotoluene	ug/L	ND	0.50	09/09/15 18:50	
4-Chlorotoluene	ug/L	ND	0.50	09/09/15 18:50	
Benzene	ug/L	ND	0.50	09/09/15 18:50	
Bromobenzene	ug/L	ND	0.50	09/09/15 18:50	
Bromochloromethane	ug/L	ND	0.50	09/09/15 18:50	
Bromodichloromethane	ug/L	ND	0.50	09/09/15 18:50	
Bromoform	ug/L	ND	0.50	09/09/15 18:50	
Bromomethane	ug/L	ND	5.0	09/09/15 18:50	
Carbon tetrachloride	ug/L	ND	0.50	09/09/15 18:50	
Chlorobenzene	ug/L	ND	0.50	09/09/15 18:50	
Chloroethane	ug/L	ND	1.0	09/09/15 18:50	
Chloroform	ug/L	ND	0.50	09/09/15 18:50	
Chloromethane	ug/L	ND	1.0	09/09/15 18:50	
cis-1,2-Dichloroethene	ug/L	ND	0.50	09/09/15 18:50	
cis-1,3-Dichloropropene	ug/L	ND	0.50	09/09/15 18:50	
Dibromochloromethane	ug/L	ND	0.50	09/09/15 18:50	
Dibromomethane	ug/L	ND	0.50	09/09/15 18:50	
Dichlorodifluoromethane	ug/L	ND	0.50	09/09/15 18:50	
Diisopropyl ether	ug/L	ND	0.50	09/09/15 18:50	
Ethylbenzene	ug/L	ND	0.50	09/09/15 18:50	

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.

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QUALITY CONTROL DATA

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

METHOD BLANK: 1551773 Matrix: Water
Associated Lab Samples: 92266486001, 92266486002, 92266486003, 92266486004, 92266486005, 92266486006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	2.0	09/09/15 18:50	
Isopropylbenzene (Cumene)	ug/L	ND	0.50	09/09/15 18:50	
m&p-Xylene	ug/L	ND	1.0	09/09/15 18:50	
Methyl-tert-butyl ether	ug/L	ND	0.50	09/09/15 18:50	
Methylene Chloride	ug/L	ND	2.0	09/09/15 18:50	
n-Butylbenzene	ug/L	ND	0.50	09/09/15 18:50	
n-Propylbenzene	ug/L	ND	0.50	09/09/15 18:50	
Naphthalene	ug/L	ND	2.0	09/09/15 18:50	
o-Xylene	ug/L	ND	0.50	09/09/15 18:50	
sec-Butylbenzene	ug/L	ND	0.50	09/09/15 18:50	
Styrene	ug/L	ND	0.50	09/09/15 18:50	
tert-Butylbenzene	ug/L	ND	0.50	09/09/15 18:50	
Tetrachloroethene	ug/L	ND	0.50	09/09/15 18:50	
Toluene	ug/L	ND	0.50	09/09/15 18:50	
trans-1,2-Dichloroethene	ug/L	ND	0.50	09/09/15 18:50	
trans-1,3-Dichloropropene	ug/L	ND	0.50	09/09/15 18:50	
Trichloroethene	ug/L	ND	0.50	09/09/15 18:50	
Trichlorofluoromethane	ug/L	ND	1.0	09/09/15 18:50	
Vinyl chloride	ug/L	ND	1.0	09/09/15 18:50	
1,2-Dichloroethane-d4 (S)	%	98	70-130	09/09/15 18:50	
4-Bromofluorobenzene (S)	%	99	70-130	09/09/15 18:50	
Toluene-d8 (S)	%	101	70-130	09/09/15 18:50	

LABORATORY CONTROL SAMPLE: 1551774

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.6	103	60-140	
1,1,1-Trichloroethane	ug/L	50	51.5	103	60-140	
1,1,2,2-Tetrachloroethane	ug/L	50	50.2	100	60-140	
1,1,2-Trichloroethane	ug/L	50	49.1	98	60-140	
1,1-Dichloroethane	ug/L	50	49.0	98	60-140	
1,1-Dichloroethene	ug/L	50	52.6	105	60-140	
1,1-Dichloropropene	ug/L	50	53.9	108	60-140	
1,2,3-Trichlorobenzene	ug/L	50	49.3	99	60-140	
1,2,3-Trichloropropane	ug/L	50	49.9	100	60-140	
1,2,4-Trichlorobenzene	ug/L	50	47.7	95	60-140	
1,2,4-Trimethylbenzene	ug/L	50	50.9	102	60-140	
1,2-Dibromo-3-chloropropane	ug/L	50	54.6	109	60-140	
1,2-Dibromoethane (EDB)	ug/L	50	52.4	105	60-140	
1,2-Dichlorobenzene	ug/L	50	49.6	99	60-140	
1,2-Dichloroethane	ug/L	50	43.1	86	60-140	
1,2-Dichloropropane	ug/L	50	48.4	97	60-140	
1,3,5-Trimethylbenzene	ug/L	50	50.2	100	60-140	
1,3-Dichlorobenzene	ug/L	50	51.1	102	60-140	

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

LABORATORY CONTROL SAMPLE: 1551774

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichloropropane	ug/L	50	50.2	100	60-140	
1,4-Dichlorobenzene	ug/L	50	48.0	96	60-140	
2,2-Dichloropropane	ug/L	50	51.6	103	60-140	
2-Chlorotoluene	ug/L	50	49.7	99	60-140	
4-Chlorotoluene	ug/L	50	50.4	101	60-140	
Benzene	ug/L	50	51.7	103	60-140	
Bromobenzene	ug/L	50	49.5	99	60-140	
Bromochloromethane	ug/L	50	54.8	110	60-140	
Bromodichloromethane	ug/L	50	50.6	101	60-140	
Bromoform	ug/L	50	52.6	105	60-140	
Bromomethane	ug/L	50	54.8	110	60-140	
Carbon tetrachloride	ug/L	50	52.7	105	60-140	
Chlorobenzene	ug/L	50	49.7	99	60-140	
Chloroethane	ug/L	50	45.2	90	60-140	
Chloroform	ug/L	50	50.4	101	60-140	
Chloromethane	ug/L	50	44.4	89	60-140	
cis-1,2-Dichloroethene	ug/L	50	51.0	102	60-140	
cis-1,3-Dichloropropene	ug/L	50	52.2	104	60-140	
Dibromochloromethane	ug/L	50	53.0	106	60-140	
Dibromomethane	ug/L	50	49.2	98	60-140	
Dichlorodifluoromethane	ug/L	50	50.0	100	60-140	
Diisopropyl ether	ug/L	50	47.4	95	60-140	
Ethylbenzene	ug/L	50	49.3	99	60-140	
Hexachloro-1,3-butadiene	ug/L	50	56.4	113	60-140	
Isopropylbenzene (Cumene)	ug/L	50	53.9	108	60-140	
m&p-Xylene	ug/L	100	98.4	98	60-140	
Methyl-tert-butyl ether	ug/L	50	51.7	103	60-140	
Methylene Chloride	ug/L	50	48.9	98	60-140	
n-Butylbenzene	ug/L	50	48.8	98	60-140	
n-Propylbenzene	ug/L	50	48.3	97	60-140	
Naphthalene	ug/L	50	51.9	104	60-140	
o-Xylene	ug/L	50	50.5	101	60-140	
sec-Butylbenzene	ug/L	50	50.2	100	60-140	
Styrene	ug/L	50	53.4	107	60-140	
tert-Butylbenzene	ug/L	50	41.4	83	60-140	
Tetrachloroethene	ug/L	50	47.7	95	60-140	
Toluene	ug/L	50	48.8	98	60-140	
trans-1,2-Dichloroethene	ug/L	50	51.0	102	60-140	
trans-1,3-Dichloropropene	ug/L	50	52.5	105	60-140	
Trichloroethene	ug/L	50	47.5	95	60-140	
Trichlorofluoromethane	ug/L	50	47.5	95	60-140	
Vinyl chloride	ug/L	50	47.4	95	60-140	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Toluene-d8 (S)	%			99	70-130	

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(704)875-9092

QUALITY CONTROL DATA

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1551775 1551776

Parameter	Units	92266487012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	21.7	21.4	109	107	60-140	1	
1,1,1-Trichloroethane	ug/L	ND	20	20	24.2	23.2	121	116	60-140	4	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	21.2	20.7	106	104	60-140	2	
1,1,2-Trichloroethane	ug/L	ND	20	20	21.9	20.6	109	103	60-140	6	
1,1-Dichloroethane	ug/L	ND	20	20	22.6	21.4	113	107	60-140	5	
1,1-Dichloroethene	ug/L	ND	20	20	25.3	24.4	127	122	60-140	4	
1,1-Dichloropropene	ug/L	ND	20	20	25.4	24.2	127	121	60-140	5	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	20.4	21.4	102	107	60-140	5	
1,2,3-Trichloropropane	ug/L	ND	20	20	21.6	20.1	108	101	60-140	7	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	20.3	20.3	102	102	60-140	0	
1,2,4-Trimethylbenzene	ug/L	ND	20	20	23.0	22.2	115	111	60-140	4	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	22.8	22.1	114	111	60-140	3	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	22.3	22.0	111	110	60-140	1	
1,2-Dichlorobenzene	ug/L	ND	20	20	22.4	21.5	112	107	60-140	4	
1,2-Dichloroethane	ug/L	0.74	20	20	20.2	19.3	97	93	60-140	4	
1,2-Dichloropropane	ug/L	ND	20	20	21.6	20.7	108	104	60-140	4	
1,3,5-Trimethylbenzene	ug/L	ND	20	20	23.0	22.1	115	110	60-140	4	
1,3-Dichlorobenzene	ug/L	ND	20	20	23.0	22.0	115	110	60-140	4	
1,3-Dichloropropane	ug/L	ND	20	20	21.7	21.0	108	105	60-140	3	
1,4-Dichlorobenzene	ug/L	ND	20	20	21.6	20.7	108	104	60-140	4	
2,2-Dichloropropane	ug/L	ND	20	20	21.5	20.6	108	103	60-140	4	
2-Chlorotoluene	ug/L	ND	20	20	22.3	21.8	112	109	60-140	2	
4-Chlorotoluene	ug/L	ND	20	20	23.1	22.1	116	111	60-140	4	
Benzene	ug/L	ND	20	20	23.5	22.5	118	112	60-140	5	
Bromobenzene	ug/L	ND	20	20	22.7	21.5	113	107	60-140	5	
Bromochloromethane	ug/L	ND	20	20	24.8	23.4	124	117	60-140	6	
Bromodichloromethane	ug/L	ND	20	20	21.8	21.3	109	106	60-140	3	
Bromoform	ug/L	ND	20	20	20.1	19.6	101	98	60-140	2	
Bromomethane	ug/L	ND	20	20	21.1	20.3	105	101	60-140	4	
Carbon tetrachloride	ug/L	ND	20	20	23.2	22.9	116	115	60-140	1	
Chlorobenzene	ug/L	ND	20	20	21.9	21.3	110	106	60-140	3	
Chloroethane	ug/L	ND	20	20	21.0	19.7	105	99	60-140	6	
Chloroform	ug/L	ND	20	20	23.1	22.1	116	110	60-140	5	
Chloromethane	ug/L	ND	20	20	19.4	17.4	97	87	60-140	11	
cis-1,2-Dichloroethene	ug/L	ND	20	20	23.3	22.2	116	111	60-140	5	
cis-1,3-Dichloropropene	ug/L	ND	20	20	21.6	20.9	108	104	60-140	3	
Dibromochloromethane	ug/L	ND	20	20	21.8	21.5	109	107	60-140	2	
Dibromomethane	ug/L	ND	20	20	21.3	20.9	106	105	60-140	2	
Dichlorodifluoromethane	ug/L	ND	20	20	23.9	22.7	120	114	60-140	5	
Diisopropyl ether	ug/L	ND	20	20	21.4	20.3	107	101	60-140	5	
Ethylbenzene	ug/L	ND	20	20	22.1	21.5	110	107	60-140	3	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	24.7	25.1	124	125	60-140	1	
Isopropylbenzene (Cumene)	ug/L	ND	20	20	23.8	23.6	119	118	60-140	1	
m&p-Xylene	ug/L	ND	40	40	43.6	42.7	109	107	60-140	2	
Methyl-tert-butyl ether	ug/L	0.44J	20	20	23.8	22.7	117	111	60-140	5	
Methylene Chloride	ug/L	ND	20	20	22.5	21.2	111	105	60-140	6	

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(704)875-9092

QUALITY CONTROL DATA

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1551775 1551776

Parameter	Units	92266487012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
n-Butylbenzene	ug/L	ND	20	20	21.6	21.3	108	106	60-140	1	
n-Propylbenzene	ug/L	ND	20	20	22.5	21.9	113	109	60-140	3	
Naphthalene	ug/L	ND	20	20	21.3	21.7	106	108	60-140	2	
o-Xylene	ug/L	ND	20	20	22.1	21.6	111	108	60-140	2	
sec-Butylbenzene	ug/L	ND	20	20	23.4	22.8	117	114	60-140	3	
Styrene	ug/L	ND	20	20	22.7	21.8	113	109	60-140	4	
tert-Butylbenzene	ug/L	ND	20	20	19.4	19.0	97	95	60-140	2	
Tetrachloroethene	ug/L	ND	20	20	21.6	21.3	108	106	60-140	2	
Toluene	ug/L	ND	20	20	22.5	21.6	112	108	60-140	4	
trans-1,2-Dichloroethene	ug/L	ND	20	20	23.8	22.7	119	113	60-140	5	
trans-1,3-Dichloropropene	ug/L	ND	20	20	21.2	21.1	106	106	60-140	0	
Trichloroethene	ug/L	ND	20	20	21.1	21.2	105	106	60-140	0	
Trichlorofluoromethane	ug/L	ND	20	20	23.2	21.9	116	110	60-140	6	
Vinyl chloride	ug/L	ND	20	20	22.7	21.6	113	108	60-140	5	
1,2-Dichloroethane-d4 (S)	%						99	96	70-130		
4-Bromofluorobenzene (S)	%						97	99	70-130		
Toluene-d8 (S)	%						98	99	70-130		

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QUALIFIERS

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-C Pace Analytical Services - Charlotte

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(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: DOT-513 34613.1.61
Pace Project No.: 92266486

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92266486001	**MW-11**	SM 6200B	MSV/33301		
92266486002	**MW-5**	SM 6200B	MSV/33301		
92266486003	**MW-10**	SM 6200B	MSV/33301		
92266486004	**MW-12**	SM 6200B	MSV/33301		
92266486005	**MW-14**	SM 6200B	MSV/33301		
92266486006	**TRIP BLANK**	SM 6200B	MSV/33301		

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Pace Analytical	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: May 19, 2010 Page 1 of 2*
	Document Number: F-CHR-CS-003-rev.16	Issuing Authority: Pace Huntersville Quality Office

Client Name: Hart & Hickman

* Page 2 of 2 is for Internal Use Only

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

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

Optional
Proj. Due Date:
Proj. Name:

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

Thermometer Used: IR Gun T1401 Type of Ice: Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

Corrected Cooler Temp.: 4.7 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: 9/9/9

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: _____		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☑Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review:	JJ	Date:	9/4/15
SRF Review:	JJ	Date:	9/8/15

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

WO#: 92266486

92266486

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

1932897

Section A Required Client Information:

Company: Hart & Hickman, PC
Address: 2923 S Tryon St. Ste 100
Charlotte, NC 28203
Email To: JaCrane@harthickman.com
Phone: 704-376-0007 Fax: —
Requested Due Date/TAT: standard

Section B Required Project Information:

Report To: Jeff Crane
Copy To:
Purchase Order No.:
Project Name: DOT Sugar Creek
Project Number: DOT-513

Section C Invoice Information:

Attention: NC DOT
Company Name:
Address:
Pace Quote Reference: WBS# 34613.1.61
Pace Project Manager: Kevin Godwin
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): GRO DRO 6230D	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92266486
1	MW-11					9/4/15	1240		4				4					X		001
2	MW-5					9/4/15	1145											X		002
3	MW-10						1310											X		003
4	MW-12						1430											X		004
5	MW-14						1350											X		005
6	Trip Blank						—		2									X		006
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	H&H	9/4/15	1500		9-4-15	1500				
		9-4-15	1540	ARC	9/4/15	1540	4	Y	n	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Brandt Kayser

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY): 9/4/15

*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.

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

November 25, 2015

Chemical Testing Engineer
NCDOT
Materials & Tests Unit
1801 Blue Ridge Road
Raleigh, NC 27607

RE: Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

Dear Chemical Engineer:
Enclosed are the analytical results for sample(s) received by the laboratory on November 20, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

cc: Jeff Albano, Hart & Hickman

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CERTIFICATIONS

Project:	DOT-513 WBS#34613.1.61
Pace Project No.:	92277179

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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SAMPLE ANALYTE COUNT

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92277179001	**MW-5**	SM 6200B	CAH	63	PASI-C
92277179002	**MW-10**	SM 6200B	CAH	63	PASI-C
92277179003	**MW-11**	SM 6200B	CAH	63	PASI-C
92277179004	**MW-12**	SM 6200B	CAH	63	PASI-C
92277179005	**MW-14**	SM 6200B	CAH	63	PASI-C
92277179006	**TRIP BLANK**	SM 6200B	CAH	63	PASI-C

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ANALYTICAL RESULTS

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

Sample: MW-5 **Lab ID: 92277179001** Collected: 11/20/15 10:15 Received: 11/20/15 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		11/24/15 15:40	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		11/24/15 15:40	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		11/24/15 15:40	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		11/24/15 15:40	75-27-4	
Bromoform	ND	ug/L	0.50	1		11/24/15 15:40	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/24/15 15:40	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		11/24/15 15:40	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		11/24/15 15:40	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		11/24/15 15:40	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		11/24/15 15:40	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		11/24/15 15:40	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/24/15 15:40	75-00-3	
Chloroform	ND	ug/L	0.50	1		11/24/15 15:40	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/24/15 15:40	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		11/24/15 15:40	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		11/24/15 15:40	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		11/24/15 15:40	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		11/24/15 15:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		11/24/15 15:40	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		11/24/15 15:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 15:40	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 15:40	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 15:40	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		11/24/15 15:40	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		11/24/15 15:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		11/24/15 15:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		11/24/15 15:40	75-35-4	
cis-1,2-Dichloroethene	**0.67**	ug/L	0.50	1		11/24/15 15:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		11/24/15 15:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		11/24/15 15:40	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		11/24/15 15:40	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		11/24/15 15:40	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		11/24/15 15:40	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		11/24/15 15:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		11/24/15 15:40	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		11/24/15 15:40	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		11/24/15 15:40	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		11/24/15 15:40	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		11/24/15 15:40	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		11/24/15 15:40	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		11/24/15 15:40	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		11/24/15 15:40	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		11/24/15 15:40	103-65-1	
Styrene	ND	ug/L	0.50	1		11/24/15 15:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		11/24/15 15:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		11/24/15 15:40	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		11/24/15 15:40	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

Sample: MW-5 **Lab ID: 92277179001** Collected: 11/20/15 10:15 Received: 11/20/15 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		11/24/15 15:40	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		11/24/15 15:40	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		11/24/15 15:40	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		11/24/15 15:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		11/24/15 15:40	79-00-5	
Trichloroethene	ND	ug/L	0.50	1		11/24/15 15:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/24/15 15:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		11/24/15 15:40	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		11/24/15 15:40	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		11/24/15 15:40	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		11/24/15 15:40	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		11/24/15 15:40	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		11/24/15 15:40	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		11/24/15 15:40	17060-07-0	
4-Bromofluorobenzene (S)	101	%	70-130	1		11/24/15 15:40	460-00-4	
Toluene-d8 (S)	100	%	70-130	1		11/24/15 15:40	2037-26-5	

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ANALYTICAL RESULTS

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

Sample: MW-10 **Lab ID: 92277179002** Collected: 11/20/15 11:20 Received: 11/20/15 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		11/24/15 15:57	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		11/24/15 15:57	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		11/24/15 15:57	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		11/24/15 15:57	75-27-4	
Bromoform	ND	ug/L	0.50	1		11/24/15 15:57	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/24/15 15:57	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		11/24/15 15:57	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		11/24/15 15:57	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		11/24/15 15:57	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		11/24/15 15:57	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		11/24/15 15:57	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/24/15 15:57	75-00-3	
Chloroform	ND	ug/L	0.50	1		11/24/15 15:57	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/24/15 15:57	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		11/24/15 15:57	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		11/24/15 15:57	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		11/24/15 15:57	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		11/24/15 15:57	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		11/24/15 15:57	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		11/24/15 15:57	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 15:57	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 15:57	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 15:57	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		11/24/15 15:57	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		11/24/15 15:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		11/24/15 15:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		11/24/15 15:57	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		11/24/15 15:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		11/24/15 15:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		11/24/15 15:57	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		11/24/15 15:57	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		11/24/15 15:57	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		11/24/15 15:57	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		11/24/15 15:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		11/24/15 15:57	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		11/24/15 15:57	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		11/24/15 15:57	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		11/24/15 15:57	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		11/24/15 15:57	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		11/24/15 15:57	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		11/24/15 15:57	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		11/24/15 15:57	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		11/24/15 15:57	103-65-1	
Styrene	ND	ug/L	0.50	1		11/24/15 15:57	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		11/24/15 15:57	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		11/24/15 15:57	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		11/24/15 15:57	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

Sample: MW-10 **Lab ID: 92277179002** Collected: 11/20/15 11:20 Received: 11/20/15 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		11/24/15 15:57	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		11/24/15 15:57	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		11/24/15 15:57	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		11/24/15 15:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		11/24/15 15:57	79-00-5	
Trichloroethene	ND	ug/L	0.50	1		11/24/15 15:57	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/24/15 15:57	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		11/24/15 15:57	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		11/24/15 15:57	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		11/24/15 15:57	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		11/24/15 15:57	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		11/24/15 15:57	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		11/24/15 15:57	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		11/24/15 15:57	17060-07-0	
4-Bromofluorobenzene (S)	102	%	70-130	1		11/24/15 15:57	460-00-4	
Toluene-d8 (S)	100	%	70-130	1		11/24/15 15:57	2037-26-5	

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ANALYTICAL RESULTS

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

Sample: MW-11 **Lab ID: 92277179003** Collected: 11/20/15 10:45 Received: 11/20/15 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		11/24/15 16:14	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		11/24/15 16:14	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		11/24/15 16:14	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		11/24/15 16:14	75-27-4	
Bromoform	ND	ug/L	0.50	1		11/24/15 16:14	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/24/15 16:14	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		11/24/15 16:14	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		11/24/15 16:14	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		11/24/15 16:14	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		11/24/15 16:14	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		11/24/15 16:14	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/24/15 16:14	75-00-3	
Chloroform	ND	ug/L	0.50	1		11/24/15 16:14	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/24/15 16:14	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		11/24/15 16:14	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		11/24/15 16:14	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		11/24/15 16:14	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		11/24/15 16:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		11/24/15 16:14	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		11/24/15 16:14	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 16:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 16:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 16:14	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		11/24/15 16:14	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		11/24/15 16:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		11/24/15 16:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		11/24/15 16:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		11/24/15 16:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		11/24/15 16:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		11/24/15 16:14	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		11/24/15 16:14	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		11/24/15 16:14	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		11/24/15 16:14	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		11/24/15 16:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		11/24/15 16:14	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		11/24/15 16:14	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		11/24/15 16:14	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		11/24/15 16:14	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		11/24/15 16:14	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		11/24/15 16:14	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		11/24/15 16:14	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		11/24/15 16:14	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		11/24/15 16:14	103-65-1	
Styrene	ND	ug/L	0.50	1		11/24/15 16:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		11/24/15 16:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		11/24/15 16:14	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		11/24/15 16:14	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

Sample: MW-11 **Lab ID: 92277179003** Collected: 11/20/15 10:45 Received: 11/20/15 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		11/24/15 16:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		11/24/15 16:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		11/24/15 16:14	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		11/24/15 16:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		11/24/15 16:14	79-00-5	
Trichloroethene	**2.1**	ug/L	0.50	1		11/24/15 16:14	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/24/15 16:14	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		11/24/15 16:14	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		11/24/15 16:14	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		11/24/15 16:14	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		11/24/15 16:14	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		11/24/15 16:14	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		11/24/15 16:14	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%	70-130	1		11/24/15 16:14	17060-07-0	
4-Bromofluorobenzene (S)	98	%	70-130	1		11/24/15 16:14	460-00-4	
Toluene-d8 (S)	99	%	70-130	1		11/24/15 16:14	2037-26-5	

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ANALYTICAL RESULTS

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

Sample: MW-12 **Lab ID: 92277179004** Collected: 11/20/15 12:40 Received: 11/20/15 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		11/24/15 16:30	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		11/24/15 16:30	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		11/24/15 16:30	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		11/24/15 16:30	75-27-4	
Bromoform	ND	ug/L	0.50	1		11/24/15 16:30	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/24/15 16:30	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		11/24/15 16:30	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		11/24/15 16:30	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		11/24/15 16:30	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		11/24/15 16:30	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		11/24/15 16:30	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/24/15 16:30	75-00-3	
Chloroform	ND	ug/L	0.50	1		11/24/15 16:30	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/24/15 16:30	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		11/24/15 16:30	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		11/24/15 16:30	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		11/24/15 16:30	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		11/24/15 16:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		11/24/15 16:30	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		11/24/15 16:30	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 16:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 16:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 16:30	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		11/24/15 16:30	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		11/24/15 16:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		11/24/15 16:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		11/24/15 16:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		11/24/15 16:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		11/24/15 16:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		11/24/15 16:30	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		11/24/15 16:30	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		11/24/15 16:30	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		11/24/15 16:30	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		11/24/15 16:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		11/24/15 16:30	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		11/24/15 16:30	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		11/24/15 16:30	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		11/24/15 16:30	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		11/24/15 16:30	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		11/24/15 16:30	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		11/24/15 16:30	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		11/24/15 16:30	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		11/24/15 16:30	103-65-1	
Styrene	ND	ug/L	0.50	1		11/24/15 16:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		11/24/15 16:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		11/24/15 16:30	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		11/24/15 16:30	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

Sample: MW-12 **Lab ID: 92277179004** Collected: 11/20/15 12:40 Received: 11/20/15 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		11/24/15 16:30	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		11/24/15 16:30	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		11/24/15 16:30	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		11/24/15 16:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		11/24/15 16:30	79-00-5	
Trichloroethene	ND	ug/L	0.50	1		11/24/15 16:30	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/24/15 16:30	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		11/24/15 16:30	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		11/24/15 16:30	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		11/24/15 16:30	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		11/24/15 16:30	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		11/24/15 16:30	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		11/24/15 16:30	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		11/24/15 16:30	17060-07-0	
4-Bromofluorobenzene (S)	103	%	70-130	1		11/24/15 16:30	460-00-4	
Toluene-d8 (S)	100	%	70-130	1		11/24/15 16:30	2037-26-5	

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ANALYTICAL RESULTS

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

Sample: MW-14 **Lab ID: 92277179005** Collected: 11/20/15 12:00 Received: 11/20/15 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		11/24/15 16:47	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		11/24/15 16:47	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		11/24/15 16:47	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		11/24/15 16:47	75-27-4	
Bromoform	ND	ug/L	0.50	1		11/24/15 16:47	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/24/15 16:47	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		11/24/15 16:47	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		11/24/15 16:47	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		11/24/15 16:47	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		11/24/15 16:47	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		11/24/15 16:47	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/24/15 16:47	75-00-3	
Chloroform	ND	ug/L	0.50	1		11/24/15 16:47	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/24/15 16:47	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		11/24/15 16:47	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		11/24/15 16:47	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		11/24/15 16:47	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		11/24/15 16:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		11/24/15 16:47	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		11/24/15 16:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 16:47	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 16:47	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 16:47	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		11/24/15 16:47	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		11/24/15 16:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		11/24/15 16:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		11/24/15 16:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		11/24/15 16:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		11/24/15 16:47	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		11/24/15 16:47	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		11/24/15 16:47	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		11/24/15 16:47	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		11/24/15 16:47	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		11/24/15 16:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		11/24/15 16:47	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		11/24/15 16:47	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		11/24/15 16:47	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		11/24/15 16:47	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		11/24/15 16:47	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		11/24/15 16:47	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		11/24/15 16:47	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		11/24/15 16:47	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		11/24/15 16:47	103-65-1	
Styrene	ND	ug/L	0.50	1		11/24/15 16:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		11/24/15 16:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		11/24/15 16:47	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		11/24/15 16:47	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

Sample: MW-14 **Lab ID: 92277179005** Collected: 11/20/15 12:00 Received: 11/20/15 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		11/24/15 16:47	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		11/24/15 16:47	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		11/24/15 16:47	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		11/24/15 16:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		11/24/15 16:47	79-00-5	
Trichloroethene	**0.59**	ug/L	0.50	1		11/24/15 16:47	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/24/15 16:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		11/24/15 16:47	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		11/24/15 16:47	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		11/24/15 16:47	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		11/24/15 16:47	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		11/24/15 16:47	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		11/24/15 16:47	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		11/24/15 16:47	17060-07-0	
4-Bromofluorobenzene (S)	101	%	70-130	1		11/24/15 16:47	460-00-4	
Toluene-d8 (S)	99	%	70-130	1		11/24/15 16:47	2037-26-5	

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ANALYTICAL RESULTS

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

Sample: TRIP BLANK **Lab ID: 92277179006** Collected: 11/20/15 00:00 Received: 11/20/15 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Benzene	ND	ug/L	0.50	1		11/24/15 17:04	71-43-2	
Bromobenzene	ND	ug/L	0.50	1		11/24/15 17:04	108-86-1	
Bromochloromethane	ND	ug/L	0.50	1		11/24/15 17:04	74-97-5	
Bromodichloromethane	ND	ug/L	0.50	1		11/24/15 17:04	75-27-4	
Bromoform	ND	ug/L	0.50	1		11/24/15 17:04	75-25-2	
Bromomethane	ND	ug/L	5.0	1		11/24/15 17:04	74-83-9	
n-Butylbenzene	ND	ug/L	0.50	1		11/24/15 17:04	104-51-8	
sec-Butylbenzene	ND	ug/L	0.50	1		11/24/15 17:04	135-98-8	
tert-Butylbenzene	ND	ug/L	0.50	1		11/24/15 17:04	98-06-6	
Carbon tetrachloride	ND	ug/L	0.50	1		11/24/15 17:04	56-23-5	
Chlorobenzene	ND	ug/L	0.50	1		11/24/15 17:04	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/24/15 17:04	75-00-3	
Chloroform	ND	ug/L	0.50	1		11/24/15 17:04	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/24/15 17:04	74-87-3	
2-Chlorotoluene	ND	ug/L	0.50	1		11/24/15 17:04	95-49-8	
4-Chlorotoluene	ND	ug/L	0.50	1		11/24/15 17:04	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0	1		11/24/15 17:04	96-12-8	
Dibromochloromethane	ND	ug/L	0.50	1		11/24/15 17:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	0.50	1		11/24/15 17:04	106-93-4	
Dibromomethane	ND	ug/L	0.50	1		11/24/15 17:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 17:04	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 17:04	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	0.50	1		11/24/15 17:04	106-46-7	
Dichlorodifluoromethane	ND	ug/L	0.50	1		11/24/15 17:04	75-71-8	
1,1-Dichloroethane	ND	ug/L	0.50	1		11/24/15 17:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	0.50	1		11/24/15 17:04	107-06-2	
1,1-Dichloroethene	ND	ug/L	0.50	1		11/24/15 17:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		11/24/15 17:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		11/24/15 17:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	0.50	1		11/24/15 17:04	78-87-5	
1,3-Dichloropropane	ND	ug/L	0.50	1		11/24/15 17:04	142-28-9	
2,2-Dichloropropane	ND	ug/L	0.50	1		11/24/15 17:04	594-20-7	
1,1-Dichloropropene	ND	ug/L	0.50	1		11/24/15 17:04	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		11/24/15 17:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		11/24/15 17:04	10061-02-6	
Diisopropyl ether	ND	ug/L	0.50	1		11/24/15 17:04	108-20-3	
Ethylbenzene	ND	ug/L	0.50	1		11/24/15 17:04	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1		11/24/15 17:04	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	0.50	1		11/24/15 17:04	98-82-8	
Methylene Chloride	ND	ug/L	2.0	1		11/24/15 17:04	75-09-2	
Methyl-tert-butyl ether	ND	ug/L	0.50	1		11/24/15 17:04	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		11/24/15 17:04	91-20-3	
n-Propylbenzene	ND	ug/L	0.50	1		11/24/15 17:04	103-65-1	
Styrene	ND	ug/L	0.50	1		11/24/15 17:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		11/24/15 17:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1		11/24/15 17:04	79-34-5	
Tetrachloroethene	ND	ug/L	0.50	1		11/24/15 17:04	127-18-4	

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ANALYTICAL RESULTS

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

Sample: TRIP BLANK **Lab ID: 92277179006** Collected: 11/20/15 00:00 Received: 11/20/15 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6200B MSV	Analytical Method: SM 6200B							
Toluene	ND	ug/L	0.50	1		11/24/15 17:04	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1		11/24/15 17:04	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1		11/24/15 17:04	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	0.50	1		11/24/15 17:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	0.50	1		11/24/15 17:04	79-00-5	
Trichloroethene	ND	ug/L	0.50	1		11/24/15 17:04	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/24/15 17:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	0.50	1		11/24/15 17:04	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	0.50	1		11/24/15 17:04	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	0.50	1		11/24/15 17:04	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		11/24/15 17:04	75-01-4	
m&p-Xylene	ND	ug/L	1.0	1		11/24/15 17:04	179601-23-1	
o-Xylene	ND	ug/L	0.50	1		11/24/15 17:04	95-47-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%	70-130	1		11/24/15 17:04	17060-07-0	
4-Bromofluorobenzene (S)	102	%	70-130	1		11/24/15 17:04	460-00-4	
Toluene-d8 (S)	99	%	70-130	1		11/24/15 17:04	2037-26-5	

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QUALITY CONTROL DATA

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

QC Batch: MSV/34412 Analysis Method: SM 6200B
QC Batch Method: SM 6200B Analysis Description: 6200B MSV
Associated Lab Samples: 92277179001, 92277179002, 92277179003, 92277179004, 92277179005, 92277179006

METHOD BLANK: 1614104 Matrix: Water
Associated Lab Samples: 92277179001, 92277179002, 92277179003, 92277179004, 92277179005, 92277179006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	11/24/15 15:24	
1,1,1-Trichloroethane	ug/L	ND	0.50	11/24/15 15:24	
1,1,2,2-Tetrachloroethane	ug/L	ND	0.50	11/24/15 15:24	
1,1,2-Trichloroethane	ug/L	ND	0.50	11/24/15 15:24	
1,1-Dichloroethane	ug/L	ND	0.50	11/24/15 15:24	
1,1-Dichloroethene	ug/L	ND	0.50	11/24/15 15:24	
1,1-Dichloropropene	ug/L	ND	0.50	11/24/15 15:24	
1,2,3-Trichlorobenzene	ug/L	ND	2.0	11/24/15 15:24	
1,2,3-Trichloropropane	ug/L	ND	0.50	11/24/15 15:24	
1,2,4-Trichlorobenzene	ug/L	ND	2.0	11/24/15 15:24	
1,2,4-Trimethylbenzene	ug/L	ND	0.50	11/24/15 15:24	
1,2-Dibromo-3-chloropropane	ug/L	ND	1.0	11/24/15 15:24	
1,2-Dibromoethane (EDB)	ug/L	ND	0.50	11/24/15 15:24	
1,2-Dichlorobenzene	ug/L	ND	0.50	11/24/15 15:24	
1,2-Dichloroethane	ug/L	ND	0.50	11/24/15 15:24	
1,2-Dichloropropane	ug/L	ND	0.50	11/24/15 15:24	
1,3,5-Trimethylbenzene	ug/L	ND	0.50	11/24/15 15:24	
1,3-Dichlorobenzene	ug/L	ND	0.50	11/24/15 15:24	
1,3-Dichloropropane	ug/L	ND	0.50	11/24/15 15:24	
1,4-Dichlorobenzene	ug/L	ND	0.50	11/24/15 15:24	
2,2-Dichloropropane	ug/L	ND	0.50	11/24/15 15:24	
2-Chlorotoluene	ug/L	ND	0.50	11/24/15 15:24	
4-Chlorotoluene	ug/L	ND	0.50	11/24/15 15:24	
Benzene	ug/L	ND	0.50	11/24/15 15:24	
Bromobenzene	ug/L	ND	0.50	11/24/15 15:24	
Bromochloromethane	ug/L	ND	0.50	11/24/15 15:24	
Bromodichloromethane	ug/L	ND	0.50	11/24/15 15:24	
Bromoform	ug/L	ND	0.50	11/24/15 15:24	
Bromomethane	ug/L	ND	5.0	11/24/15 15:24	
Carbon tetrachloride	ug/L	ND	0.50	11/24/15 15:24	
Chlorobenzene	ug/L	ND	0.50	11/24/15 15:24	
Chloroethane	ug/L	ND	1.0	11/24/15 15:24	
Chloroform	ug/L	ND	0.50	11/24/15 15:24	
Chloromethane	ug/L	ND	1.0	11/24/15 15:24	
cis-1,2-Dichloroethene	ug/L	ND	0.50	11/24/15 15:24	
cis-1,3-Dichloropropene	ug/L	ND	0.50	11/24/15 15:24	
Dibromochloromethane	ug/L	ND	0.50	11/24/15 15:24	
Dibromomethane	ug/L	ND	0.50	11/24/15 15:24	
Dichlorodifluoromethane	ug/L	ND	0.50	11/24/15 15:24	
Diisopropyl ether	ug/L	ND	0.50	11/24/15 15:24	
Ethylbenzene	ug/L	ND	0.50	11/24/15 15:24	

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QUALITY CONTROL DATA

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

METHOD BLANK: 1614104 Matrix: Water
Associated Lab Samples: 92277179001, 92277179002, 92277179003, 92277179004, 92277179005, 92277179006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	2.0	11/24/15 15:24	
Isopropylbenzene (Cumene)	ug/L	ND	0.50	11/24/15 15:24	
m&p-Xylene	ug/L	ND	1.0	11/24/15 15:24	
Methyl-tert-butyl ether	ug/L	ND	0.50	11/24/15 15:24	
Methylene Chloride	ug/L	ND	2.0	11/24/15 15:24	
n-Butylbenzene	ug/L	ND	0.50	11/24/15 15:24	
n-Propylbenzene	ug/L	ND	0.50	11/24/15 15:24	
Naphthalene	ug/L	ND	2.0	11/24/15 15:24	
o-Xylene	ug/L	ND	0.50	11/24/15 15:24	
sec-Butylbenzene	ug/L	ND	0.50	11/24/15 15:24	
Styrene	ug/L	ND	0.50	11/24/15 15:24	
tert-Butylbenzene	ug/L	ND	0.50	11/24/15 15:24	
Tetrachloroethene	ug/L	ND	0.50	11/24/15 15:24	
Toluene	ug/L	ND	0.50	11/24/15 15:24	
trans-1,2-Dichloroethene	ug/L	ND	0.50	11/24/15 15:24	
trans-1,3-Dichloropropene	ug/L	ND	0.50	11/24/15 15:24	
Trichloroethene	ug/L	ND	0.50	11/24/15 15:24	
Trichlorofluoromethane	ug/L	ND	1.0	11/24/15 15:24	
Vinyl chloride	ug/L	ND	1.0	11/24/15 15:24	
1,2-Dichloroethane-d4 (S)	%	99	70-130	11/24/15 15:24	
4-Bromofluorobenzene (S)	%	101	70-130	11/24/15 15:24	
Toluene-d8 (S)	%	101	70-130	11/24/15 15:24	

LABORATORY CONTROL SAMPLE: 1614105

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	55.4	111	60-140	
1,1,1-Trichloroethane	ug/L	50	52.1	104	60-140	
1,1,2,2-Tetrachloroethane	ug/L	50	50.7	101	60-140	
1,1,2-Trichloroethane	ug/L	50	50.4	101	60-140	
1,1-Dichloroethane	ug/L	50	49.3	99	60-140	
1,1-Dichloroethene	ug/L	50	53.9	108	60-140	
1,1-Dichloropropene	ug/L	50	53.8	108	60-140	
1,2,3-Trichlorobenzene	ug/L	50	47.0	94	60-140	
1,2,3-Trichloropropane	ug/L	50	49.8	100	60-140	
1,2,4-Trichlorobenzene	ug/L	50	47.5	95	60-140	
1,2,4-Trimethylbenzene	ug/L	50	50.8	102	60-140	
1,2-Dibromo-3-chloropropane	ug/L	50	50.5	101	60-140	
1,2-Dibromoethane (EDB)	ug/L	50	51.1	102	60-140	
1,2-Dichlorobenzene	ug/L	50	49.7	99	60-140	
1,2-Dichloroethane	ug/L	50	45.0	90	60-140	
1,2-Dichloropropane	ug/L	50	48.5	97	60-140	
1,3,5-Trimethylbenzene	ug/L	50	50.5	101	60-140	
1,3-Dichlorobenzene	ug/L	50	50.8	102	60-140	

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QUALITY CONTROL DATA

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

LABORATORY CONTROL SAMPLE: 1614105

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichloropropane	ug/L	50	47.5	95	60-140	
1,4-Dichlorobenzene	ug/L	50	52.2	104	60-140	
2,2-Dichloropropane	ug/L	50	53.1	106	60-140	
2-Chlorotoluene	ug/L	50	48.4	97	60-140	
4-Chlorotoluene	ug/L	50	49.7	99	60-140	
Benzene	ug/L	50	52.4	105	60-140	
Bromobenzene	ug/L	50	47.8	96	60-140	
Bromochloromethane	ug/L	50	53.5	107	60-140	
Bromodichloromethane	ug/L	50	54.8	110	60-140	
Bromoform	ug/L	50	41.0	82	60-140	
Bromomethane	ug/L	50	42.8	86	60-140	
Carbon tetrachloride	ug/L	50	56.1	112	60-140	
Chlorobenzene	ug/L	50	50.8	102	60-140	
Chloroethane	ug/L	50	47.2	94	60-140	
Chloroform	ug/L	50	51.6	103	60-140	
Chloromethane	ug/L	50	37.2	74	60-140	
cis-1,2-Dichloroethene	ug/L	50	51.2	102	60-140	
cis-1,3-Dichloropropene	ug/L	50	52.5	105	60-140	
Dibromochloromethane	ug/L	50	47.5	95	60-140	
Dibromomethane	ug/L	50	51.3	103	60-140	
Dichlorodifluoromethane	ug/L	50	40.0	80	60-140	
Diisopropyl ether	ug/L	50	52.3	105	60-140	
Ethylbenzene	ug/L	50	49.5	99	60-140	
Hexachloro-1,3-butadiene	ug/L	50	45.0	90	60-140	
Isopropylbenzene (Cumene)	ug/L	50	54.4	109	60-140	
m&p-Xylene	ug/L	100	101	101	60-140	
Methyl-tert-butyl ether	ug/L	50	52.6	105	60-140	
Methylene Chloride	ug/L	50	51.9	104	60-140	
n-Butylbenzene	ug/L	50	51.9	104	60-140	
n-Propylbenzene	ug/L	50	49.3	99	60-140	
Naphthalene	ug/L	50	48.7	97	60-140	
o-Xylene	ug/L	50	48.7	97	60-140	
sec-Butylbenzene	ug/L	50	51.2	102	60-140	
Styrene	ug/L	50	52.3	105	60-140	
tert-Butylbenzene	ug/L	50	42.9	86	60-140	
Tetrachloroethene	ug/L	50	49.0	98	60-140	
Toluene	ug/L	50	49.8	100	60-140	
trans-1,2-Dichloroethene	ug/L	50	53.1	106	60-140	
trans-1,3-Dichloropropene	ug/L	50	53.7	107	60-140	
Trichloroethene	ug/L	50	50.6	101	60-140	
Trichlorofluoromethane	ug/L	50	51.7	103	60-140	
Vinyl chloride	ug/L	50	53.3	107	60-140	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			100	70-130	

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QUALITY CONTROL DATA

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1614106 1614107

Parameter	Units	92277179002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	22.2	22.9	111	115	60-140	3	
1,1,1-Trichloroethane	ug/L	ND	20	20	22.5	23.6	112	118	60-140	5	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	21.3	22.0	106	110	60-140	3	
1,1,2-Trichloroethane	ug/L	ND	20	20	21.4	21.9	107	110	60-140	3	
1,1-Dichloroethane	ug/L	ND	20	20	21.9	22.6	110	113	60-140	3	
1,1-Dichloroethene	ug/L	ND	20	20	24.8	25.3	124	126	60-140	2	
1,1-Dichloropropene	ug/L	ND	20	20	24.3	24.7	121	124	60-140	2	
1,2,3-Trichlorobenzene	ug/L	ND	20	20	20.4	20.8	102	104	60-140	2	
1,2,3-Trichloropropane	ug/L	ND	20	20	21.3	21.8	106	109	60-140	2	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	20.3	20.9	102	105	60-140	3	
1,2,4-Trimethylbenzene	ug/L	ND	20	20	22.7	23.1	113	115	60-140	2	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	18.3	19.3	91	97	60-140	6	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	21.7	22.2	109	111	60-140	2	
1,2-Dichlorobenzene	ug/L	ND	20	20	21.7	22.3	108	111	60-140	3	
1,2-Dichloroethane	ug/L	ND	20	20	19.5	20.2	97	100	60-140	4	
1,2-Dichloropropane	ug/L	ND	20	20	21.2	21.3	106	107	60-140	1	
1,3,5-Trimethylbenzene	ug/L	ND	20	20	22.4	22.9	112	115	60-140	3	
1,3-Dichlorobenzene	ug/L	ND	20	20	22.4	22.9	112	115	60-140	2	
1,3-Dichloropropane	ug/L	ND	20	20	21.0	21.4	105	107	60-140	2	
1,4-Dichlorobenzene	ug/L	ND	20	20	22.4	23.3	112	117	60-140	4	
2,2-Dichloropropane	ug/L	ND	20	20	21.2	21.9	106	110	60-140	3	
2-Chlorotoluene	ug/L	ND	20	20	21.8	22.6	109	113	60-140	4	
4-Chlorotoluene	ug/L	ND	20	20	22.2	22.6	111	113	60-140	2	
Benzene	ug/L	ND	20	20	23.1	23.3	115	117	60-140	1	
Bromobenzene	ug/L	ND	20	20	20.8	21.7	104	109	60-140	4	
Bromochloromethane	ug/L	ND	20	20	23.5	23.6	118	118	60-140	1	
Bromodichloromethane	ug/L	ND	20	20	21.2	22.0	106	110	60-140	4	
Bromoform	ug/L	ND	20	20	15.0	15.8	75	79	60-140	5	
Bromomethane	ug/L	ND	20	20	23.2	22.1	116	111	60-140	5	
Carbon tetrachloride	ug/L	ND	20	20	22.7	23.9	113	119	60-140	5	
Chlorobenzene	ug/L	ND	20	20	22.6	22.9	113	114	60-140	1	
Chloroethane	ug/L	ND	20	20	25.5	25.9	128	130	60-140	2	
Chloroform	ug/L	ND	20	20	22.7	23.3	113	117	60-140	3	
Chloromethane	ug/L	ND	20	20	20.5	21.2	103	106	60-140	3	
cis-1,2-Dichloroethene	ug/L	ND	20	20	22.6	23.1	113	116	60-140	2	
cis-1,3-Dichloropropene	ug/L	ND	20	20	20.2	21.2	101	106	60-140	5	
Dibromochloromethane	ug/L	ND	20	20	18.0	18.9	90	95	60-140	5	
Dibromomethane	ug/L	ND	20	20	21.5	21.9	107	109	60-140	2	
Dichlorodifluoromethane	ug/L	ND	20	20	18.6	19.1	93	96	60-140	3	
Diisopropyl ether	ug/L	ND	20	20	23.0	23.4	115	117	60-140	2	
Ethylbenzene	ug/L	ND	20	20	22.7	22.5	114	113	60-140	1	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	19.0	19.9	95	99	60-140	4	
Isopropylbenzene (Cumene)	ug/L	ND	20	20	24.0	24.5	120	122	60-140	2	
m&p-Xylene	ug/L	ND	40	40	45.2	45.9	113	115	60-140	1	
Methyl-tert-butyl ether	ug/L	ND	20	20	22.4	23.1	112	116	60-140	3	
Methylene Chloride	ug/L	ND	20	20	21.7	22.7	109	113	60-140	4	

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QUALITY CONTROL DATA

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1614106 1614107

Parameter	Units	92277179002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
n-Butylbenzene	ug/L	ND	20	20	21.8	22.8	109	114	60-140	5	
n-Propylbenzene	ug/L	ND	20	20	22.5	22.8	112	114	60-140	1	
Naphthalene	ug/L	ND	20	20	21.6	21.6	108	108	60-140	0	
o-Xylene	ug/L	ND	20	20	21.4	21.6	107	108	60-140	1	
sec-Butylbenzene	ug/L	ND	20	20	22.7	23.5	114	117	60-140	3	
Styrene	ug/L	ND	20	20	21.1	21.6	105	108	60-140	3	
tert-Butylbenzene	ug/L	ND	20	20	19.1	19.6	95	98	60-140	3	
Tetrachloroethene	ug/L	ND	20	20	21.5	22.2	107	111	60-140	3	
Toluene	ug/L	ND	20	20	22.3	22.5	111	113	60-140	1	
trans-1,2-Dichloroethene	ug/L	ND	20	20	23.8	24.7	119	123	60-140	4	
trans-1,3-Dichloropropene	ug/L	ND	20	20	20.1	20.9	101	104	60-140	4	
Trichloroethene	ug/L	ND	20	20	22.7	22.8	112	113	60-140	1	
Trichlorofluoromethane	ug/L	ND	20	20	25.7	26.2	129	131	60-140	2	
Vinyl chloride	ug/L	ND	20	20	25.8	26.0	129	130	60-140	1	
1,2-Dichloroethane-d4 (S)	%						97	98	70-130		
4-Bromofluorobenzene (S)	%						101	101	70-130		
Toluene-d8 (S)	%						100	99	70-130		

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(704)875-9092

QUALIFIERS

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-C Pace Analytical Services - Charlotte

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: DOT-513 WBS#34613.1.61
Pace Project No.: 92277179

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92277179001	**MW-5**	SM 6200B	MSV/34412		
92277179002	**MW-10**	SM 6200B	MSV/34412		
92277179003	**MW-11**	SM 6200B	MSV/34412		
92277179004	**MW-12**	SM 6200B	MSV/34412		
92277179005	**MW-14**	SM 6200B	MSV/34412		
92277179006	**TRIP BLANK**	SM 6200B	MSV/34412		

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Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: November 17, 2015 Page 1 of 2*
	Document Number: **F-CHR-CS-003-rev.16.1**	Issuing Authority: Pace Huntersville Quality Office

Client Name: Hart & Hickman

* Page 2 of 2 is for Internal Use Only

Courier: ☐ Fed Ex ☐ UPS ☐ USP ☐ Client ☐ Commercial ☐ (Pace) Other_____

Optional
Proj. Due Date:
Proj. Name:

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

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other_____

Thermometer Used: IR Gun (T1505) **Type of Ice:** (Wet) Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor No Correction

Corrected Cooler Temp.: 5.4 °C **Biological Tissue is Frozen:** Yes No (N/A)

Temp should be above freezing to 6°C

Date and Initials of person examining contents: AP 11-20-15

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☐Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WV		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☑Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):_____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

CURF Review: DB **Date:** 11/20/15

SRF Review: [illegible] **Date:** 11/21/15

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

WO#: 92277179

92277179

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

1995426

Section A Required Client Information:

Company: HART HICKMAN
Address: 2923 S. Tryon St
Charlotte, NC 28203
Email To: JAlbano@HARTHICKMAN.com
Phone: 704 586 0202 Fax: —
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Jeff Albano
Copy To:
Purchase Order No.:
Project Name: DOT Sugar Creek
Project Number: DOT-513

Section C Invoice Information:

Attention: NC DOT
Company Name:
Address:
Pace Quote Reference: WBR# 34613.1.61
Pace Project Manager:
Pace Profile #: 4122-9

REGULATORY AGENCY

☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): VOC 5-6 2008

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N) VOC 5-6 2008	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92277179
1	MW-5					11/20/15	1015		4				X					X		001
2	MW-10						1120											X		002
3	MW-11						1045											X		003
4	MW-12						1240											X		004
5	MW-14						1200											X		005
6	TRIP BLANK						—		2									X		006
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Gabe Stein / HH	11/20/15	1330	[signature]	11/20	1350				
	[signature]	11/20	1630	[signature]	11/20/15	1630	SW	✓	✓	✓

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Gabe Stein
SIGNATURE of SAMPLER: G. St
DATE Signed (MM/DD/YY): 11/20/15

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.