



August 21, 2012

Mr. Maurice Moore  
Division of Hazardous Waste Management  
New York State Department of Environmental Protection  
270 Michigan Ave.  
Buffalo, NY 14203-2999

**Re: 2012 Semi-Annual Performance Monitoring Report  
Essex/Hope Site, Jamestown, New York  
URS Project No. 41569181**

Dear Mr. Moore:

This letter report is a summary of the January through June 2012 operation performance period for the remedial system at the above-referenced site. This report is submitted in accordance with the revised Performance Monitoring Plan (PMP) prepared by URS Corporation (URS) dated February 2011.

### ***GENERAL OPERATIONS***

During the reporting period, approximately 835,115 gallons of groundwater were treated and discharged to the City of Jamestown POTW. The system carbon was changed out on January 4, 2012 and May 1, 2012. There were no major disruptions in normal operating conditions. The following sections discuss the data on groundwater quality sampling and groundwater flow.

### ***GROUNDWATER FLOW EVALUATION***

Water level measurements were taken on March 13 and June 11, 2012. Water level data is provided in Appendix A of this report. Groundwater contour maps illustrating pumping conditions during the reporting period are provided as Figures 1 through 4. Recovery Well RW-6D remained offline for most of the 1<sup>st</sup> half while continued efforts were made to address the acetone hotspot. URS' research determined that acetone is not included on the USEPA list of Total Toxic Organics (TTOs) and therefore, not considered a compound of interest. On June 6, 2012, a letter of notification was sent to the City of Jamestown Board of Public Utilities (BPU) advising that acetone would no longer be reported as a TTO. RW-6D was subsequently restarted on June 11, 2012. The attached plots for deep groundwater elevations reflect the period when RW-6D was shutdown.

### ***WATER QUALITY RESULTS***

Performance monitoring for 2012 includes semi-annual sampling of the recovery wells during the 2<sup>nd</sup> and 4<sup>th</sup> Quarters and monthly influent and effluent sampling of the treatment system. Recovery Well sampling was conducted on June 12, 2012. Samples were analyzed by Pace

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Analytical of Greensburg, Pennsylvania for volatile organic compounds (VOC's) by US EPA Method 8260B. The recovery well analytical results are summarized in Table 1. Laboratory reports are included as Appendix B.

In accordance with the City of Jamestown Board of Public Utilities (BPU) Industrial Wastewater Discharge Permit Number 26 (Permit), the treatment system is monitored for pH and VOCs to ensure compliance with the discharge requirements. Sampling points include the influent, primary carbon effluent and secondary carbon effluent (discharge to POTW). These points are sampled each month and reported to the Jamestown BPU on a semi-annual basis. Groundwater treatment system data for January through June 2012 is summarized on Tables 2 through 4. These tables represent the system influent, individual carbon vessel effluent and post carbon (system discharge to POTW) concentrations. There were no discharge exceedances during this reporting period.

This letter report has been prepared to satisfy the reporting requirements stipulated in the Performance Monitoring Plan and to evaluate remediation effectiveness on a semi-annual basis. If you have any questions or desire additional information, please do not hesitate to call me at (412) 503-4672.

Sincerely,

URS



Mark Dowiak, P.E.  
Project Manager  
URS Dow Business Unit

Enclosure

cc: Tim King – The Dow Chemical Company  
Matt Forcucci – New York State Department of Health  
James Charles, Esq. – Division of Environmental Enforcement  
Carlo J. Montisano – Custom Production Manufacturing, Inc.  
Valerie Sibeto – URS

## TABLES

**Table 1**  
**Semi-Annual Recovery Well Sampling**  
**2<sup>nd</sup> Quarter Analytical Results**  
**June 12, 2012**

<b>Volatile Organic Compounds (Method 8260A) - mg/L</b>	<b>Site GW RAOs</b>	<b>RW-1S</b>	<b>RW-2S</b>	<b>RW-2D</b>	<b>RW-6D</b>	<b>RW-3S</b>
Acetone		ND	ND	ND	<b>20,600</b>	ND
Benzene		ND	ND	<b>10</b>	<b>23.9</b>	<b>1.1</b>
2-Butanone		ND	ND	ND	<b>259</b>	ND
Carbon Disulfide		ND	ND	ND	ND	ND
Chloromethane		ND	ND	ND	ND	ND
Isopropylbenzene (Cumene)		ND	ND	ND	ND	<b>4.2</b>
1,1-Dichloroethane		ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	<b>27.4</b>	<b>28.9</b>	ND
cis-1,2-Dichloroethene		<b>459</b>	<b>42.0</b>	<b>7,660</b>	<b>16,700</b>	ND
trans-1,2-Dichloroethene	<b>5</b>	ND	ND	<b>165</b>	<b>181</b>	ND
Ethylbenzene	<b>5</b>	ND	ND	ND	ND	ND
4-Methyl-2-pentanone		ND	ND	ND	ND	ND
Methylene Chloride		ND	ND	ND	ND	ND
Tetrachloroethene		ND	ND	ND	ND	ND
Toluene	<b>5</b>	ND	ND	ND	ND	ND
Trichloroethene	<b>5</b>	<b>294</b>	<b>10.8</b>	<b>1,040</b>	<b>3,900</b>	ND
Vinyl Chloride	<b>5</b>	<b>16.9</b>	ND	<b>837</b>	<b>3,390</b>	ND
Xylenes (total)	<b>5</b>	ND	ND	ND	ND	ND

**Notes:**

Site GW RAOs = Site Groundwater Remedial Action Objectives

µg/l = Micrograms per liter

ND = Not Detected/Below minimum laboratory reporting limit

**Table 2**  
**POTW Monthly Monitoring Summary**  
**2012 System Pre-Carbon**  
**Volatile Organic Compounds (mg/L)**

Sample Date	17-Jan-12	15-Feb-12	20-Mar-12	19-Apr-12	18-May-12	11-Jun-12						
Acetone	ND	ND	ND	ND	ND	ND						
2-Butanone	ND	ND	ND	ND	ND	ND						
Benzene	4.0	8.3	7.3	6.2	7.7	8.2						
Chloroform	ND	ND	ND	ND	ND	ND						
Chloromethane	ND	ND	ND	ND	ND	ND						
Isopropylbenzene (Cumene)	ND	ND	ND	ND	ND	ND						
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND						
1,1-Dichloroethene	10.9	23.0	17.6	14.9	17.9	18.5						
cis-1,2-Dichloroethene	2,800	5,650	5,210	4,840	4,650	5,380						
trans-1,2-Dichloroethene	56.2	87.5	67.8	107	84.1	99.3						
Ethylbenzene	ND	ND	ND	ND	ND	ND						
Methylene Chloride	ND	ND	ND	ND	ND	ND						
Toluene	ND	ND	ND	ND	ND	ND						
Trichloroethene	476	649	611	469	839	817						
Vinyl Chloride	346	630	427	368	394	426						
Total Xylenes	ND	ND	ND	ND	ND	ND						
<b>Pre-Carbon TOTAL VOCs</b>	<b>3,693</b>	<b>7,048</b>	<b>6,341</b>	<b>5,805</b>	<b>5,993</b>	<b>6,749</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Notes:**

ND = Not detected/Below minimum laboratory reporting limit  
 µg/L = micrograms per liter  
 Pre-Carbon sample results represent system influent.

System Carbon was changed out on January 4, 2012 and May 1, 2012.

**Table 3**  
**POTW Monthly Monitoring Summary**  
**2012 System Primary Carbon Effluent**  
**Volatile Organic Compounds (mg/L)**

<b>Sample Date</b>	<b>17-Jan-12</b>	<b>15-Feb-12</b>	<b>20-Mar-12</b>	<b>19-Apr-12</b>	<b>18-May-12</b>	<b>11-Jun-12</b>						
Acetone	ND	ND	ND	ND	ND	ND						
2-Butanone	ND	ND	ND	ND	ND	ND						
Benzene	ND	ND	ND	ND	ND	ND						
Chloroform	ND	ND	ND	ND	ND	ND						
Chloromethane	ND	ND	ND	ND	ND	ND						
Isopropylbenzene (Cumene)	ND	ND	ND	ND	ND	ND						
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND						
1,1-Dichloroethene	ND	ND	ND	5.5	ND	ND						
cis-1,2-Dichloroethene	12.5	15.1	1,730	3,450	11.0	11.4						
trans-1,2-Dichloroethene	ND	ND	ND	27.8	ND	ND						
Ethylbenzene	ND	ND	ND	ND	ND	ND						
Methylene Chloride	ND	ND	ND	ND	ND	ND						
Toluene	ND	ND	ND	ND	ND	ND						
Trichloroethene	ND	ND	ND	7.7	ND	ND						
Vinyl Chloride	564	637	767	488	4.5	6.2						
Total Xylenes	ND	ND	ND	ND	ND	ND						
<b>Primary-Carbon TOTAL VOCs</b>	<b>577</b>	<b>652</b>	<b>2,497</b>	<b>3,979</b>	<b>16</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Notes:**

ND = Not detected/Below minimum laboratory reporting limit

µg/L = micrograms per liter

Primary Carbon sample results represent effluent from the first carbon vessel in the two (2) carbon vessel system.

System Carbon was changed out on January 4, 2012 and May 1, 2012.

**Table 4**  
**POTW Monthly Monitoring Summary**  
**2012 System Post Carbon Effluent**  
**Volatile Organic Compounds (mg/L)**

Sample Date	17-Jan-12	15-Feb-12	20-Mar-12	19-Apr-12	18-May-12	11-Jun-12						
Acetone	ND	ND	ND	ND	ND	ND						
2-Butanone	ND	ND	ND	ND	ND	ND						
Benzene	ND	ND	ND	ND	ND	ND						
Chloroform	ND	ND	ND	ND	ND	ND						
Chloromethane	ND	ND	ND	ND	ND	ND						
Isopropylbenzene (Cumene)	ND	ND	ND	ND	ND	ND						
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND						
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND						
cis-1,2-Dichloroethene	255	268	206	169	49.5	34.0						
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND						
Ethylbenzene	ND	ND	ND	ND	ND	ND						
Methylene Chloride	ND	ND	ND	ND	ND	ND						
Toluene	ND	ND	ND	ND	ND	ND						
Trichloroethene	7.2	9.5	6.2	ND	ND	ND						
Vinyl Chloride	119	495	655	833	1.8	1.3						
Total Xylenes	ND	ND	ND	ND	ND	ND						
<b>Post-Carbon TOTAL VOCs</b>	<b>381</b>	<b>773</b>	<b>867</b>	<b>1,002</b>	<b>51</b>	<b>35</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Post-Carbon TOTAL TTOs</b>	<b>381</b>	<b>773</b>	<b>867</b>	<b>1,002</b>	<b>51</b>	<b>35</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Notes:**

ND = Not detected/Below minimum laboratory reporting limit

ug/L = micrograms per liter

**POTW Discharge Limit = 2,130 ug/L Total Toxic Organics (TTOs)**

Total TTOs = Sum of detected VOCs considered TTOs for Discharge Limit Criteria contained in 40 CFR 401, part 15, Toxic Pollutants (\*note: Acetone and 2-Butanone are not included).

Total VOCs = Sum of all VOCs detected.

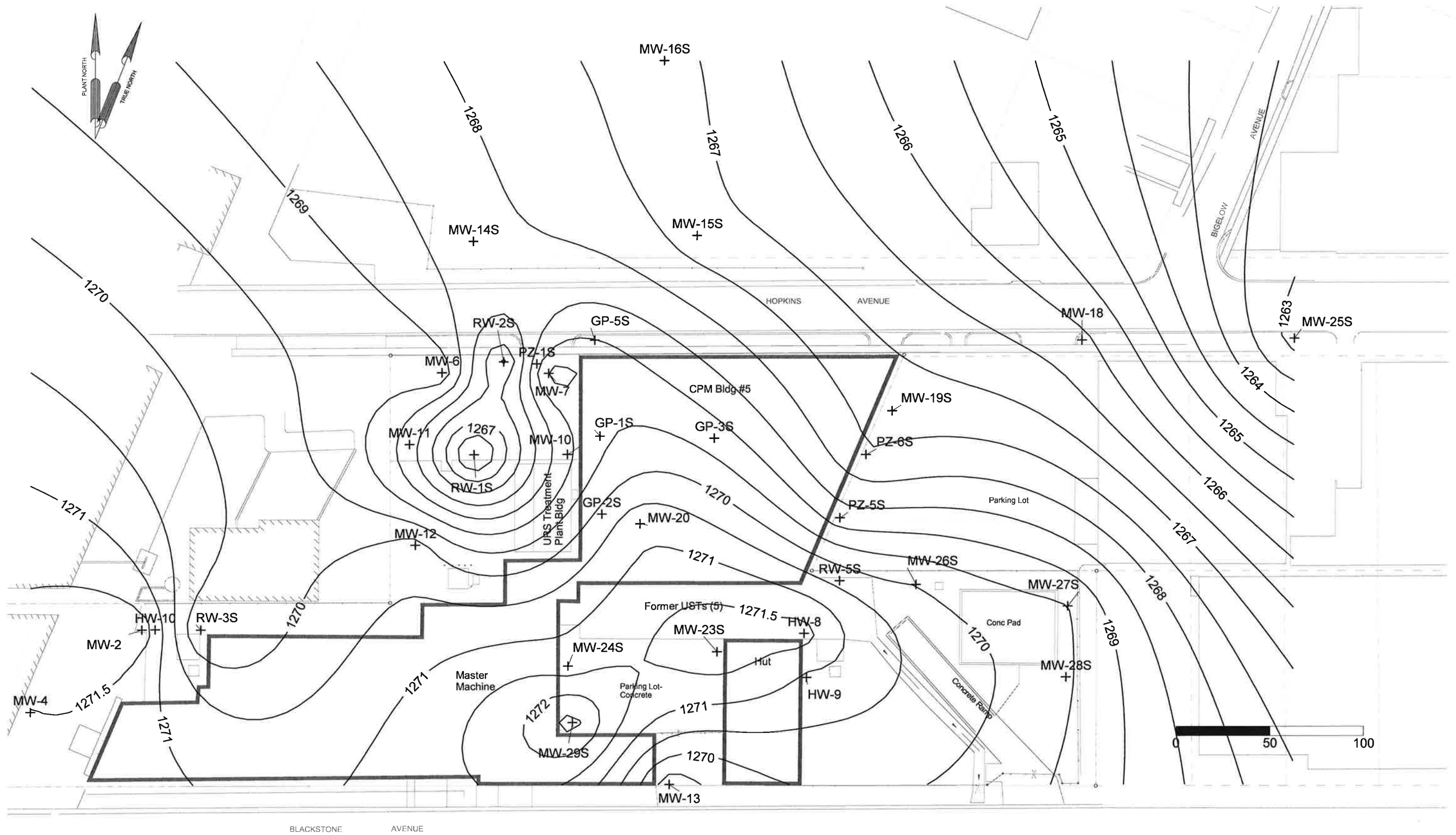
Post-Carbon sample results represent system effluent from the secondary carbon vessel (or the third carbon vessel if used) to the POTW.

Post-Carbon sample is a laboratory prepared composite of four (4) grab samples taken at 30-minute intervals.

System Carbon was changed out on January 4, 2012 and May 1, 2012.

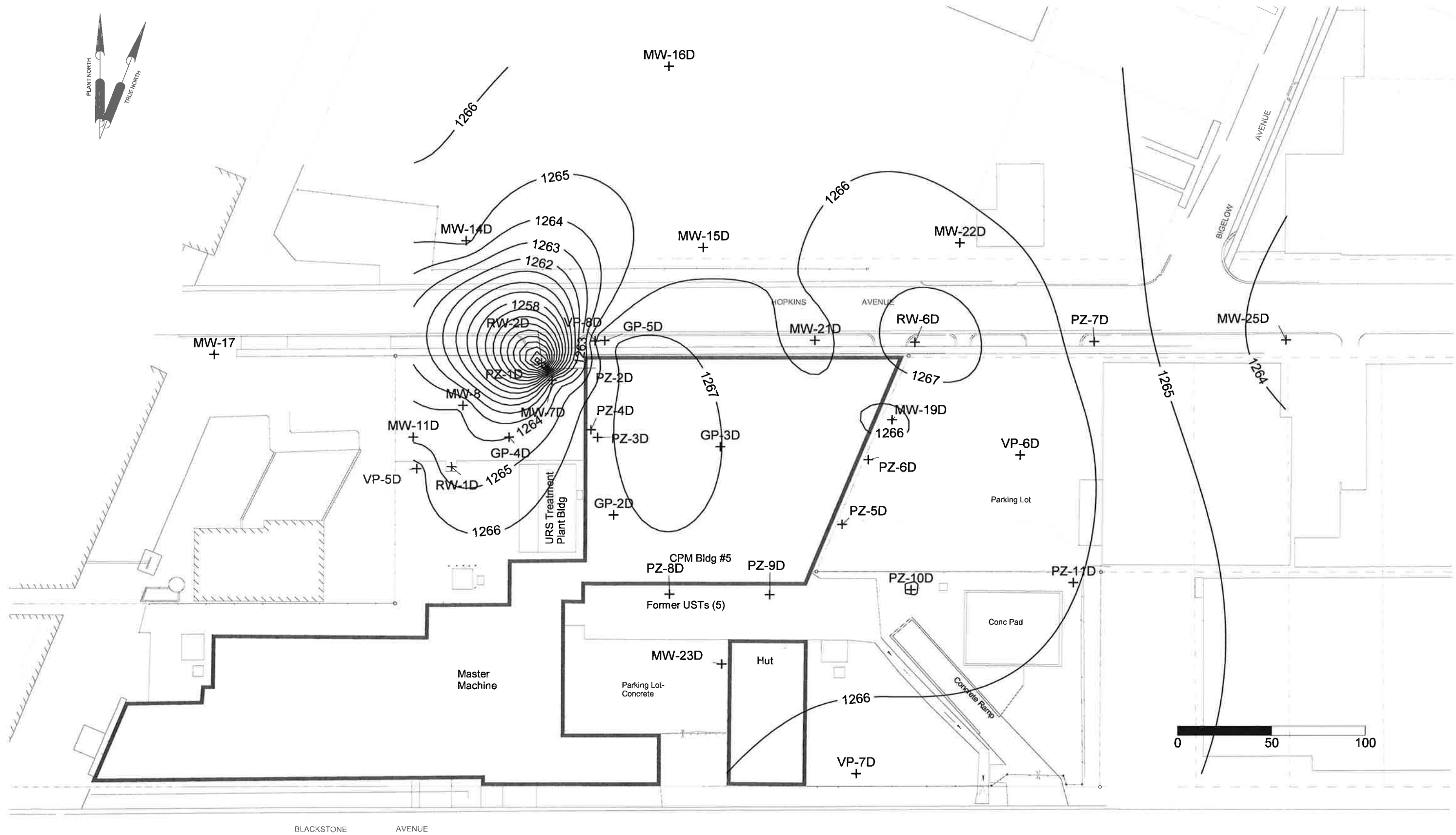
## FIGURES



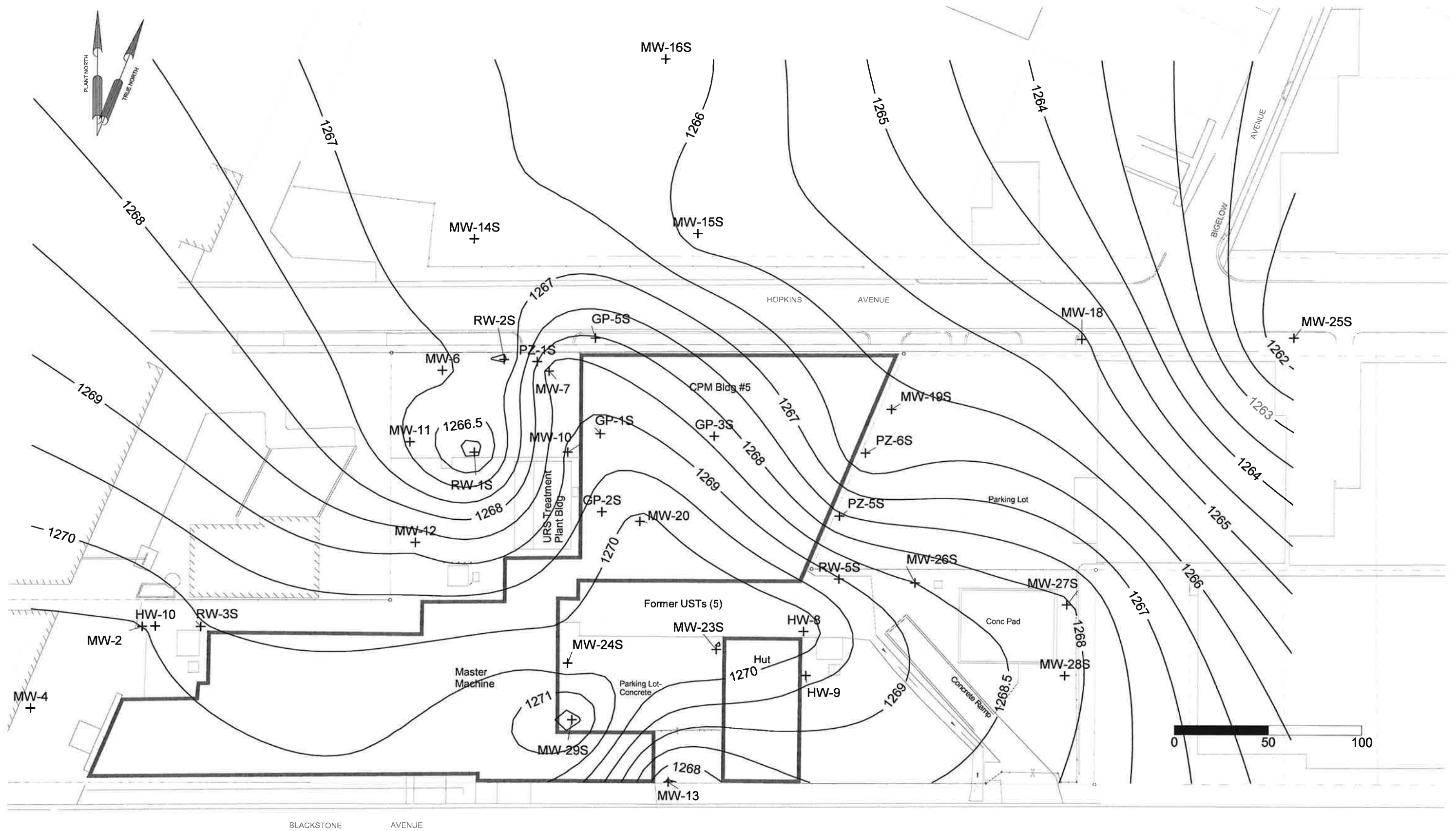


Essex Specialty Products, Inc.  
 Essex/Hope Site, Jamestown, NY  
 URS 41569181

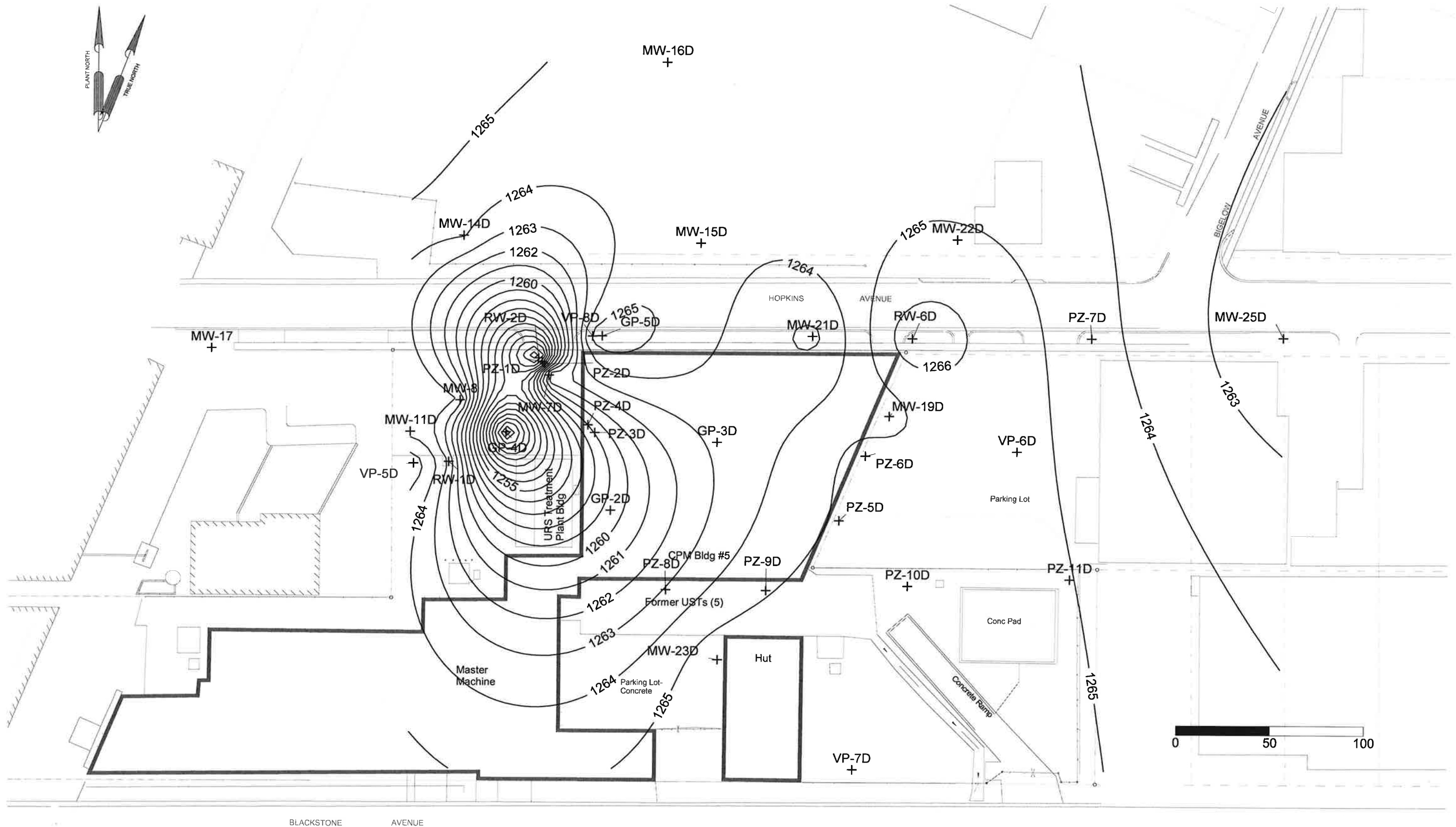
**Figure 1- Shallow Groundwater Elevations**  
**March 13, 2012**



**Figure 2- Deep Groundwater Elevations**  
 March 13, 2012



**Figure 3- Shallow Groundwater Elevations**  
 June 11, 2012



**Figure 4- Deep Groundwater Elevations  
 June 11, 2012**

## **APPENDIX A**

### **Water Level Measurement Data**

**APPENDIX A-1**

**2012 Water Level Data  
Essex/Hope Site  
Jamestown, NY**

Monitoring Location	Northing	Easting	Reference Elevation (ft msl)	Depth to Top of Screen	Depth to Bottom of Screen	Screened Zone	March 13, 2012			June 11, 2012		
							Depth to Water	Depth to Top of Pump	Groundwater Elevation (ft msl)	Depth to Water	Depth to Top of Pump	Groundwater Elevation (ft msl)
MW-1	9758.7161	10383.6499	1280.48		20.0	Shallow	NA	NA	NA	NA	NA	NA
MW-2	9837.1531	9959.6857	1279.87		16.0	Shallow	8.01	NA	1271.86	9.34	NA	1270.53
MW-4	9792.3277	9900.7631	1281.02	13.0	18.0	Shallow	9.53	NA	1271.49	10.09	NA	1270.93
MW-5	9789.6222	9631.761	1280.82	9.5	20.0	Shallow	NA	NA	NA	NA	NA	NA
MW-6	9977.1197	10118.8762	1277.98			Shallow	8.56	NA	1269.42	10.76	NA	1267.22
MW-7	9976.6467	10175.6797	1277.73	10.0	20.0	Shallow	7.99	NA	1269.74	8.92	NA	1268.81
MW-7D	9973.2593	10174.8524	1277.8	35.0	45.0	Deep	14.78	NA	1263.02	15.56	NA	1262.24
MW-7DD	9970.8547	10176.2698	1277.74	90.0	100.0	Glacial Till	NA	NA	NA	NA	NA	NA
MW-8	9959.6089	10127.6898	1277.97	39.6	49.6	Deep	14.01	NA	1263.96	15.03	NA	1262.94
MW-10	9932.4702	10185.7078	1277.94	8.5	18.5	Shallow	NA	NA	NA	8.81	NA	1269.13
MW-11	9937.9912	10101.7016	1277.75	5.0	15.0	Shallow	9.53	NA	1268.22	10.84	NA	1266.91
MW-11D	9942.3792	10101.1482	1277.85	35.0	45.0	Deep	13.14	NA	1264.71	14.21	NA	1263.64
MW-12	9883.0874	10104.9278	1278.18	4.0	14.0	Shallow	7.94	NA	1270.24	9.32	NA	1268.86
MW-13	9752.0619	10240.2934	1278.12	8.0	18.0	Shallow	8.95	NA	1269.17	10.74	NA	1267.38
MW-14S	10048.7753	10135.5198	1280.25	10.0	20.0	Shallow	12.08	NA	1268.17	13.68	NA	1266.57
MW-14D	10049.5051	10129.1897	1280.01	40.0	50.0	Deep	14.70	NA	1265.31	15.93	NA	1264.08
MW-15S	10051.8272	10254.4862	1279.55	10.0	20.0	Shallow	12.33	NA	1267.22	13.76	NA	1265.79
MW-15D	10045.5611	10255.205	1279.46	34.0	44.0	Deep	13.84	NA	1265.62	15.12	NA	1264.34
MW-16S	10146.7788	10236.8582	1279.32	7.0	17.0	Shallow	12.09	NA	1267.23	12.94	NA	1266.38
MW-16D	10143.9497	10236.6005	1279.05	36.0	46.0	Deep	13.26	NA	1265.79	14.41	NA	1264.64
MW-17	9987.6315	9995.5207	1278.7			Deep	NA	NA	NA	NA	NA	NA
MW-18	9994.6655	10459.2207	1275.49		20.0	Shallow	9.35	NA	1266.14	10.40	NA	1265.09
MW-19S	9956.1454	10358.207	1276.82	9.0	19.0	Shallow	9.50	NA	1267.32	10.66	NA	1266.16
MW-19D	9951.569	10355.9748	1276.21	34.0	44.0	Deep	10.60	NA	1265.61	11.64	NA	1264.57
MW-20	9894.7336	10224.5128	1278.56	6.5	11.5	Shallow	7.70	NA	1270.86	8.44	NA	1270.12
MW-21D	9995.0094	10314.801	1276.12	31.5	41.0	Deep	10.47	NA	1265.65	13.41	NA	1262.71
MW-22D	10048.1687	10391.3548	1276.04	32.5	42.0	Deep	9.78	NA	1266.26	10.91	NA	1265.13
MW-23S	9824.696	10265.6365	1277.85	5.0	14.5	Shallow	6.02	NA	1271.83	7.33	NA	1270.52
MW-23D	9818.3152	10265.6675	1277.89	28.0	37.5	Deep	11.29	NA	1266.60	12.19	NA	1265.70

**APPENDIX A-1**

**2012 Water Level Data  
Essex/Hope Site  
Jamestown, NY**

Monitoring Location	Northing	Easting	Reference Elevation (ft msl)	Depth to Top of Screen	Depth to Bottom of Screen	Screened Zone	March 13, 2012			June 11, 2012		
							Depth to Water	Depth to Top of Pump	Groundwater Elevation (ft msl)	Depth to Water	Depth to Top of Pump	Groundwater Elevation (ft msl)
MW-24S	9817.1277	10186.2119	1278.77	5.0	14.5	Shallow	7.55	NA	1271.22	8.61	NA	1270.16
MW-25S	9995.6	10572.35	1272.76	7.0	17.0	Shallow	9.97	NA	1262.79	11.28	NA	1261.48
MW-25D	9995.46	10565.28	1273.41	31.0	41.0	Deep	9.85	NA	1263.56	11.30	NA	1262.11
MW-26S	9861.3519	10371.3241	1279.422	5.0	15.0	Shallow	9.43	NA	1269.99	10.91	NA	1268.51
MW-27S	9849.63382	10452.2197	1278.864	10.0	20.0	Shallow	9.33	NA	1269.53	10.76	NA	1268.10
MW-28S	9810.84281	10451.4089	1279.25	7.0	17.0	Shallow	9.68	NA	1269.57	11.06	NA	1268.19
MW-29S	9786.06533	10188.6419	1280.7	4.0	14.0	Shallow	7.95	NA	1272.75	8.89	NA	1271.81
HW-8	9834.664	10312.0885	1277.81	6.0	16.0	Shallow	6.10	NA	1271.71	7.47	NA	1270.34
HW-9	9810.5264	10313.3873	1280.78	6.0	16.0	Shallow	9.89	NA	1270.89	11.18	NA	1269.60
HW-10	9837.2976	9966.7406	1279.55	7.0	17.0	Shallow	NA	NA	NA	NA	NA	NA
RW-1S	9932.3606	10136.0515	1275.81	10.5	16.0	Shallow	10.09	11.50	1265.72	10.11	11.50	1265.70
RW-1D	9925.9898	10121.7689	1276.34	32.0	57.0	Deep	12.18	NA	1264.16	13.35	NA	1262.99
RW-2S	9982.9501	10151.7112	1276.33	10.0	15.5	Shallow	9.45	12.70	1266.88	9.93	12.70	1266.40
RW-2D	9982.6088	10169.3122	1276.35	27.0	42.0	Deep	29.01	36.90	1247.34	27.91	36.90	1248.44
RW-3S	9837.0894	9990.9663	1278.14	9.0	13.5	Shallow	8.72	8.80	1269.42	8.12	8.80	1270.02
RW-5S	9863.4298	10330.7462	1277.29	7.0	10.0	Shallow	NA	NA	NA	NA	NA	NA
RW-6D	9994.04	10367.91	1277.33			Deep	9.32	NA	1268.01	10.54	NA	1266.79
GP-1S	9942.4384	10203.1085	1278.83	8.0	12.8	Shallow	NA	NA	NA	NA	NA	NA
GP-2S	9899.8775	10204.1632	1278.46	2.6	12.6	Shallow	NA	NA	NA	NA	NA	NA
GP-2D	9899.7358	10207.9807	1278.56	30.0	34.8	Deep	NA	NA	NA	NA	NA	NA
GP-3S	9941.2543	10263.8898	1278.59	4.0	14.0	Shallow	NA	NA	NA	NA	NA	NA
GP-3D	9936.9027	10264.588	1278.62	34.0	38.8	Deep	NA	NA	NA	NA	NA	NA
GP-4S	9940.86*	10154.97*	1278.06	10.8	15.8	Shallow	8.47	NA	1269.59	9.30	NA	1268.76
GP-4D	9942.1743	10152.2232	1277.95	39.0	43.8	Deep	13.94	NA	1264.01	32.74	NA	1245.21
GP-5S	9994.7299	10200.2055	1277.44	7.0	11.8	Shallow	NA	NA	NA	NA	NA	NA
GP-5D	9994.8642	10202.9906	1276.81	36.0	40.8	Deep	NA	NA	NA	NA	NA	NA
PZ-1S	9981.8469	10169.3122	1277.77			Shallow	NA	NA	NA	NA	NA	NA
PZ-1D	9980.4294	10171.2636	1277.64			Deep	NA	NA	NA	NA	NA	NA
PZ-2D	9979.5627	10172.4761	1277.55			Deep	NA	NA	NA	NA	NA	NA

**APPENDIX A-1**

**2012 Water Level Data  
Essex/Hope Site  
Jamestown, NY**

Monitoring Location	Northing	Easting	Reference Elevation (ft msl)	Depth to Top of Screen	Depth to Bottom of Screen	Screened Zone	March 13, 2012			June 11, 2012		
							Depth to Water	Depth to Top of Pump	Groundwater Elevation (ft msl)	Depth to Water	Depth to Top of Pump	Groundwater Elevation (ft msl)
PZ-3D	9942.0414	10199.2937	1278.8	20.0	40.0	Deep	NA	NA	NA	NA	NA	NA
PZ-4D	9946.2326	10195.679	1278.71			Deep	NA	NA	NA	NA	NA	NA
PZ-5S	9897.7381	10330.7876	1276.42	5.5	12.0	Shallow	7.69	NA	1268.73	8.88	NA	1267.54
PZ-5D	9894.5731	10329.7148	1276.4	21.0	42.0	Deep	10.06	NA	1266.34	11.29	NA	1265.11
PZ-6S	9932.2079	10344.4895	1276.61	8.5	13.5	Shallow	9.08	NA	1267.53	10.52	NA	1266.09
PZ-6D	9929.8004	10343.4742	1276.62	25.5	45.5	Deep	10.21	NA	1266.41	11.16	NA	1265.46
PZ-7D	9994.5452	10463.2465	1275.68	22.0	42.0	Deep	10.08	NA	1265.60	11.33	NA	1264.35
PZ-8D	9856.4908	10237.8118	1278.12	21.0	41.0	Deep	NA	NA	NA	NA	NA	NA
PZ-9D	9856.2398	10291.1658	1277.3	19.0	39.0	Deep	NA	NA	NA	NA	NA	NA
PZ-10D	9858.9821	10366.4236	1277.52	26.5	46.5	Deep	10.46	NA	1267.06	11.73	NA	1265.79
PZ-11D	9863.0677	10452.8989	1276.63	21.3	41.3	Deep	NA	NA	NA	NA	NA	NA
VP-5D	9925.1052	10103.0141	1277.88	12.5	34.3	Deep	11.37	NA	1266.51	12.31	NA	1265.57
VP-6S	9928.8123	10423.4628	1276.48	18.3	24.0	Deep upper gravel	9.69	NA	1266.79	10.83	NA	1265.65
VP-6D	9932.5744	10424.1378	1276.6	29.5	39.5	Deep	9.83	NA	1266.77	11.31	NA	1265.29
VP-7D	9758.4881	10337.7133	1278.64	20.4	39.3	Deep	13.45	NA	1265.19	13.07	NA	1265.57
VP-8D	9994.6178	10197.8133	1277.15	20.0	39.0	Deep	10.72	NA	1266.43	11.63	NA	1265.52

Notes:

NM = Not Measure  
NA = Not Applicable

RW-4S, RW-5S taken offline in October 2002 for UST Removal.  
Wells RW-4S, TW-01, and HW-7 destroyed during UST removal operations.



## **Appendix B**

### **Laboratory Certificates of Analysis**

June 27, 2012

Mr. Mark Dowiak  
URS Corporation  
Foster Plaza 4  
501 Holiday Drive, Suite 300  
Pittsburgh, PA 15220

RE: Project: 41569181.10000 Essex-Hope  
Pace Project No.: 3071297

Dear Mr. Dowiak:

Enclosed are the analytical results for sample(s) received by the laboratory on June 13, 2012. 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.

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

Sincerely,



Rachel Christner for  
Timothy Reed  
timothy.reed@pacelabs.com  
Project Manager

Enclosures

cc: Ms. Valerie Sibeto, URS Corporation



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## CERTIFICATIONS

Project: 41569181.10000 Essex-Hope  
Pace Project No.: 3071297

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### **Pennsylvania Certification IDs**

1638 Roseytown Rd Suites 2,3&4 Greensburg, PA 15601  
ACCLASS DOD-ELAP Accreditation #: ADE-1544  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California/TNI Certification #: 04222CA  
Colorado Certification  
Connecticut Certification #: PH 0694  
Delaware Certification  
Florida/TNI Certification #: E87683  
Guam/PADEP Certification  
Hawaii/PADEP Certification  
Idaho Certification  
Illinois/PADEP Certification  
Indiana/PADEP Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: 90133  
Louisiana/TNI Certification #: LA080002  
Louisiana/TNI Certification #: 4086  
Maine Certification #: PA0091  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification  
Missouri Certification #: 235  
Montana Certification #: Cert 0082  
Nevada Certification  
New Hampshire/TNI Certification #: 2976  
New Jersey/TNI Certification #: PA 051  
New Mexico Certification  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
Oregon/TNI Certification #: PA200002  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
South Dakota Certification  
Tennessee Certification #: TN2867  
Texas/TNI Certification #: T104704188  
Utah/TNI Certification #: ANTE  
Virgin Island/PADEP Certification  
Virginia Certification #: 00112  
Virginia VELAP (Cert # 460198)  
Washington Certification #: C868  
West Virginia Certification #: 143  
Wisconsin/PADEP Certification  
Wyoming Certification #: 8TMS-Q

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## ANALYTICAL RESULTS

Project: 41569181.10000 Essex-Hope

Pace Project No.: 3071297

Sample: RW-2D		Lab ID: 3071297001	Collected: 06/12/12 13:55	Received: 06/13/12 09:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		06/23/12 13:36	67-64-1	
Benzene	10	ug/L	1.0	1		06/23/12 13:36	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		06/23/12 13:36	75-27-4	
Bromoform	ND	ug/L	5.0	1		06/23/12 13:36	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/23/12 13:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		06/23/12 13:36	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		06/23/12 13:36	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		06/23/12 13:36	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		06/23/12 13:36	108-90-7	
Chloroethane	ND	ug/L	5.0	1		06/23/12 13:36	75-00-3	
Chloroform	ND	ug/L	5.0	1		06/23/12 13:36	67-66-3	
Chloromethane	ND	ug/L	5.0	1		06/23/12 13:36	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		06/23/12 13:36	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		06/23/12 13:36	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		06/23/12 13:36	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		06/23/12 13:36	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		06/23/12 13:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		06/23/12 13:36	107-06-2	
1,1-Dichloroethene	27.4	ug/L	5.0	1		06/23/12 13:36	75-35-4	
cis-1,2-Dichloroethene	7660	ug/L	100	20		06/23/12 14:01	156-59-2	
trans-1,2-Dichloroethene	165	ug/L	5.0	1		06/23/12 13:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		06/23/12 13:36	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		06/23/12 13:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		06/23/12 13:36	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		06/23/12 13:36	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		06/23/12 13:36	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		06/23/12 13:36	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		06/23/12 13:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		06/23/12 13:36	108-10-1	
Styrene	ND	ug/L	5.0	1		06/23/12 13:36	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		06/23/12 13:36	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		06/23/12 13:36	127-18-4	
Toluene	ND	ug/L	5.0	1		06/23/12 13:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		06/23/12 13:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		06/23/12 13:36	79-00-5	
Trichloroethene	1040	ug/L	100	20		06/23/12 14:01	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		06/23/12 13:36	75-69-4	
Vinyl chloride	837	ug/L	20.0	20		06/23/12 14:01	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		06/23/12 13:36	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		06/23/12 13:36	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101	%	70-130	1		06/23/12 13:36	460-00-4	
1,2-Dichloroethane-d4 (S)	118	%	70-130	1		06/23/12 13:36	17060-07-0	
Toluene-d8 (S)	103	%	70-130	1		06/23/12 13:36	2037-26-5	

## ANALYTICAL RESULTS

Project: 41569181.10000 Essex-Hope

Pace Project No.: 3071297

Sample: RW-2S		Lab ID: 3071297002	Collected: 06/12/12 14:00	Received: 06/13/12 09:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		06/23/12 15:15	67-64-1	
Benzene	ND	ug/L	1.0	1		06/23/12 15:15	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		06/23/12 15:15	75-27-4	
Bromoform	ND	ug/L	5.0	1		06/23/12 15:15	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/23/12 15:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		06/23/12 15:15	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		06/23/12 15:15	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		06/23/12 15:15	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		06/23/12 15:15	108-90-7	
Chloroethane	ND	ug/L	5.0	1		06/23/12 15:15	75-00-3	
Chloroform	ND	ug/L	5.0	1		06/23/12 15:15	67-66-3	
Chloromethane	ND	ug/L	5.0	1		06/23/12 15:15	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		06/23/12 15:15	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		06/23/12 15:15	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		06/23/12 15:15	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		06/23/12 15:15	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		06/23/12 15:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		06/23/12 15:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		06/23/12 15:15	75-35-4	
cis-1,2-Dichloroethene	<b>42.0</b>	ug/L	5.0	1		06/23/12 15:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		06/23/12 15:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		06/23/12 15:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		06/23/12 15:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		06/23/12 15:15	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		06/23/12 15:15	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		06/23/12 15:15	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		06/23/12 15:15	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		06/23/12 15:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		06/23/12 15:15	108-10-1	
Styrene	ND	ug/L	5.0	1		06/23/12 15:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		06/23/12 15:15	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		06/23/12 15:15	127-18-4	
Toluene	ND	ug/L	5.0	1		06/23/12 15:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		06/23/12 15:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		06/23/12 15:15	79-00-5	
Trichloroethene	<b>10.8</b>	ug/L	5.0	1		06/23/12 15:15	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		06/23/12 15:15	75-69-4	
Vinyl chloride	ND	ug/L	1.0	1		06/23/12 15:15	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		06/23/12 15:15	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		06/23/12 15:15	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		06/23/12 15:15	460-00-4	
1,2-Dichloroethane-d4 (S)	127 %		70-130	1		06/23/12 15:15	17060-07-0	
Toluene-d8 (S)	102 %		70-130	1		06/23/12 15:15	2037-26-5	

## ANALYTICAL RESULTS

Project: 41569181.10000 Essex-Hope

Pace Project No.: 3071297

Sample: RW-3S		Lab ID: 3071297003	Collected: 06/12/12 14:05	Received: 06/13/12 09:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		06/23/12 13:12	67-64-1	
Benzene	1.1	ug/L	1.0	1		06/23/12 13:12	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		06/23/12 13:12	75-27-4	
Bromoform	ND	ug/L	5.0	1		06/23/12 13:12	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/23/12 13:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		06/23/12 13:12	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		06/23/12 13:12	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		06/23/12 13:12	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		06/23/12 13:12	108-90-7	
Chloroethane	ND	ug/L	5.0	1		06/23/12 13:12	75-00-3	
Chloroform	ND	ug/L	5.0	1		06/23/12 13:12	67-66-3	
Chloromethane	ND	ug/L	5.0	1		06/23/12 13:12	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		06/23/12 13:12	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		06/23/12 13:12	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		06/23/12 13:12	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		06/23/12 13:12	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		06/23/12 13:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		06/23/12 13:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		06/23/12 13:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		06/23/12 13:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		06/23/12 13:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		06/23/12 13:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		06/23/12 13:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		06/23/12 13:12	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		06/23/12 13:12	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		06/23/12 13:12	591-78-6	
Isopropylbenzene (Cumene)	4.2	ug/L	1.0	1		06/23/12 13:12	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		06/23/12 13:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		06/23/12 13:12	108-10-1	
Styrene	ND	ug/L	5.0	1		06/23/12 13:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		06/23/12 13:12	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		06/23/12 13:12	127-18-4	
Toluene	ND	ug/L	5.0	1		06/23/12 13:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		06/23/12 13:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		06/23/12 13:12	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		06/23/12 13:12	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		06/23/12 13:12	75-69-4	
Vinyl chloride	ND	ug/L	1.0	1		06/23/12 13:12	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		06/23/12 13:12	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		06/23/12 13:12	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100 %		70-130	1		06/23/12 13:12	460-00-4	
1,2-Dichloroethane-d4 (S)	124 %		70-130	1		06/23/12 13:12	17060-07-0	
Toluene-d8 (S)	101 %		70-130	1		06/23/12 13:12	2037-26-5	

## ANALYTICAL RESULTS

Project: 41569181.10000 Essex-Hope

Pace Project No.: 3071297

Sample: RW-1S		Lab ID: 3071297004	Collected: 06/12/12 14:10	Received: 06/13/12 09:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		06/23/12 14:26	67-64-1	
Benzene	ND	ug/L	1.0	1		06/23/12 14:26	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		06/23/12 14:26	75-27-4	
Bromoform	ND	ug/L	5.0	1		06/23/12 14:26	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/23/12 14:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		06/23/12 14:26	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		06/23/12 14:26	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		06/23/12 14:26	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		06/23/12 14:26	108-90-7	
Chloroethane	ND	ug/L	5.0	1		06/23/12 14:26	75-00-3	
Chloroform	ND	ug/L	5.0	1		06/23/12 14:26	67-66-3	
Chloromethane	ND	ug/L	5.0	1		06/23/12 14:26	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		06/23/12 14:26	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		06/23/12 14:26	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		06/23/12 14:26	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		06/23/12 14:26	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		06/23/12 14:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		06/23/12 14:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		06/23/12 14:26	75-35-4	
cis-1,2-Dichloroethene	<b>459</b>	ug/L	50.0	10		06/23/12 14:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		06/23/12 14:26	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		06/23/12 14:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		06/23/12 14:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		06/23/12 14:26	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		06/23/12 14:26	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		06/23/12 14:26	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		06/23/12 14:26	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		06/23/12 14:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		06/23/12 14:26	108-10-1	
Styrene	ND	ug/L	5.0	1		06/23/12 14:26	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		06/23/12 14:26	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		06/23/12 14:26	127-18-4	
Toluene	ND	ug/L	5.0	1		06/23/12 14:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		06/23/12 14:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		06/23/12 14:26	79-00-5	
Trichloroethene	<b>294</b>	ug/L	5.0	1		06/23/12 14:26	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		06/23/12 14:26	75-69-4	
Vinyl chloride	<b>16.9</b>	ug/L	1.0	1		06/23/12 14:26	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		06/23/12 14:26	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		06/23/12 14:26	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	98 %		70-130	1		06/23/12 14:26	460-00-4	
1,2-Dichloroethane-d4 (S)	121 %		70-130	1		06/23/12 14:26	17060-07-0	
Toluene-d8 (S)	99 %		70-130	1		06/23/12 14:26	2037-26-5	

### QUALITY CONTROL DATA

Project: 41569181.10000 Essex-Hope

Pace Project No.: 3071297

QC Batch: MSV/13075 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 3071297001, 3071297002, 3071297003, 3071297004

METHOD BLANK: 455358 Matrix: Water  
Associated Lab Samples: 3071297001, 3071297002, 3071297003, 3071297004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	06/23/12 09:05	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	06/23/12 09:05	
1,1,2-Trichloroethane	ug/L	ND	5.0	06/23/12 09:05	
1,1-Dichloroethane	ug/L	ND	5.0	06/23/12 09:05	
1,1-Dichloroethene	ug/L	ND	5.0	06/23/12 09:05	
1,2-Dichlorobenzene	ug/L	ND	5.0	06/23/12 09:05	
1,2-Dichloroethane	ug/L	ND	5.0	06/23/12 09:05	
1,2-Dichloropropane	ug/L	ND	5.0	06/23/12 09:05	
1,3-Dichlorobenzene	ug/L	ND	5.0	06/23/12 09:05	
1,4-Dichlorobenzene	ug/L	ND	5.0	06/23/12 09:05	
2-Butanone (MEK)	ug/L	ND	10.0	06/23/12 09:05	
2-Hexanone	ug/L	ND	10.0	06/23/12 09:05	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	06/23/12 09:05	
Acetone	ug/L	ND	10.0	06/23/12 09:05	
Benzene	ug/L	ND	1.0	06/23/12 09:05	
Bromodichloromethane	ug/L	ND	5.0	06/23/12 09:05	
Bromoform	ug/L	ND	5.0	06/23/12 09:05	
Bromomethane	ug/L	ND	5.0	06/23/12 09:05	
Carbon disulfide	ug/L	ND	5.0	06/23/12 09:05	
Carbon tetrachloride	ug/L	ND	5.0	06/23/12 09:05	
Chlorobenzene	ug/L	ND	5.0	06/23/12 09:05	
Chloroethane	ug/L	ND	5.0	06/23/12 09:05	
Chloroform	ug/L	ND	5.0	06/23/12 09:05	
Chloromethane	ug/L	ND	5.0	06/23/12 09:05	
cis-1,2-Dichloroethene	ug/L	ND	5.0	06/23/12 09:05	
cis-1,3-Dichloropropene	ug/L	ND	5.0	06/23/12 09:05	
Dibromochloromethane	ug/L	ND	5.0	06/23/12 09:05	
Ethylbenzene	ug/L	ND	5.0	06/23/12 09:05	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	06/23/12 09:05	
m&p-Xylene	ug/L	ND	5.0	06/23/12 09:05	
Methylene Chloride	ug/L	ND	5.0	06/23/12 09:05	
o-Xylene	ug/L	ND	5.0	06/23/12 09:05	
Styrene	ug/L	ND	5.0	06/23/12 09:05	
Tetrachloroethene	ug/L	ND	5.0	06/23/12 09:05	
Toluene	ug/L	ND	5.0	06/23/12 09:05	
trans-1,2-Dichloroethene	ug/L	ND	5.0	06/23/12 09:05	
trans-1,3-Dichloropropene	ug/L	ND	5.0	06/23/12 09:05	
Trichloroethene	ug/L	ND	5.0	06/23/12 09:05	
Trichlorofluoromethane	ug/L	ND	5.0	06/23/12 09:05	
Vinyl chloride	ug/L	ND	1.0	06/23/12 09:05	
1,2-Dichloroethane-d4 (S)	%	121	70-130	06/23/12 09:05	
4-Bromofluorobenzene (S)	%	100	70-130	06/23/12 09:05	
Toluene-d8 (S)	%	102	70-130	06/23/12 09:05	

Date: 06/27/2012 04:40 PM

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 41569181.10000 Essex-Hope

Pace Project No.: 3071297

LABORATORY CONTROL SAMPLE: 455359

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.4	102	64.3-127	
1,1,2,2-Tetrachloroethane	ug/L	20	17.8	89	64.6-121	
1,1,2-Trichloroethane	ug/L	20	18.8	94	75.6-120	
1,1-Dichloroethane	ug/L	20	23.2	116	68.5-122	
1,1-Dichloroethene	ug/L	20	23.4	117	57.1-120	
1,2-Dichlorobenzene	ug/L	20	18.7	94	69.6-120	
1,2-Dichloroethane	ug/L	20	21.4	107	60.5-133	
1,2-Dichloropropane	ug/L	20	21.6	108	71-120	
1,3-Dichlorobenzene	ug/L	20	18.7	94	68.4-121	
1,4-Dichlorobenzene	ug/L	20	18.2	91	68.5-123	
2-Butanone (MEK)	ug/L	20	25.5	127	55.7-138	
2-Hexanone	ug/L	20	24.7	124	67-133	
4-Methyl-2-pentanone (MIBK)	ug/L	20	25.2	126	64.5-121	L1
Acetone	ug/L	20	24.3	121	57.6-168	
Benzene	ug/L	20	20.5	103	69.8-120	
Bromodichloromethane	ug/L	20	19.9	99	66.5-120	
Bromoform	ug/L	20	17.6	88	61.1-120	
Bromomethane	ug/L	20	26.2	131	10.6-200	
Carbon disulfide	ug/L	20	25.9	130	60.2-122	L1
Carbon tetrachloride	ug/L	20	20.4	102	60.1-127	
Chlorobenzene	ug/L	20	19.2	96	72-120	
Chloroethane	ug/L	20	27.3	137	36.8-142	
Chloroform	ug/L	20	20.6	103	69-122	
Chloromethane	ug/L	20	28.2	141	37.2-129	CU,L3
cis-1,2-Dichloroethene	ug/L	20	23.0	115	69.5-123	
cis-1,3-Dichloropropene	ug/L	20	19.3	96	74.3-120	
Dibromochloromethane	ug/L	20	18.8	94	66.1-120	
Ethylbenzene	ug/L	20	19.1	95	70.9-124	
Isopropylbenzene (Cumene)	ug/L	20	22.7	113	68.3-129	
m&p-Xylene	ug/L	40	40.1	100	70.4-130	
Methylene Chloride	ug/L	20	19.4	97	61.5-125	
o-Xylene	ug/L	20	19.2	96	70.6-127	
Styrene	ug/L	20	20.0	100	69.9-120	
Tetrachloroethene	ug/L	20	17.0	85	63.4-121	
Toluene	ug/L	20	20.5	103	71.5-120	
trans-1,2-Dichloroethene	ug/L	20	21.7	109	64.1-120	
trans-1,3-Dichloropropene	ug/L	20	19.3	96	71-120	
Trichloroethene	ug/L	20	17.5	88	65.9-120	
Trichlorofluoromethane	ug/L	20	26.4	132	44.8-137	
Vinyl chloride	ug/L	20	24.1	120	51-127	
1,2-Dichloroethane-d4 (S)	%			114	70-130	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			102	70-130	

### QUALITY CONTROL DATA

Project: 41569181.10000 Essex-Hope

Pace Project No.: 3071297

Parameter	3071348009		MS		MSD		MS		MSD		% Rec	Limits	RPD	Qual
	Units	Result	Spike Conc.	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
1,1,1-Trichloroethane	ug/L	ND	20	20	21.1	17.8	105	89	64.3-127	17				
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	19.3	16.1	96	81	64.6-121	18				
1,1,2-Trichloroethane	ug/L	ND	20	20	19.7	17.1	99	86	75.6-120	14				
1,1-Dichloroethane	ug/L	ND	20	20	22.7	18.4	113	92	68.5-122	21				
1,1-Dichloroethene	ug/L	ND	20	20	21.0	18.4	105	92	57.1-120	13				
1,2-Dichlorobenzene	ug/L	ND	20	20	18.5	17.4	92	87	69.6-120	6				
1,2-Dichloroethane	ug/L	ND	20	20	19.8	16.6	99	83	60.5-133	18				
1,2-Dichloropropane	ug/L	ND	20	20	20.7	17.6	104	88	71-120	16				
1,3-Dichlorobenzene	ug/L	ND	20	20	17.6	16.9	88	85	68.4-121	4				
1,4-Dichlorobenzene	ug/L	ND	20	20	17.9	16.8	90	84	68.5-123	7				
2-Butanone (MEK)	ug/L	ND	20	20	24.5	19.8	122	99	55.7-138	21				
2-Hexanone	ug/L	ND	20	20	26.8	21.9	134	110	67-133	20	M0			
4-Methyl-2-pentanone (MIBK)	ug/L	ND	20	20	26.7	21.9	133	109	64.5-121	20	M0			
Acetone	ug/L	ND	20	20	24.0	22.7	110	104	57.6-168	6				
Benzene	ug/L	ND	20	20	21.8	18.4	108	91	69.8-120	17				
Bromodichloromethane	ug/L	ND	20	20	19.4	16.3	97	82	66.5-120	17				
Bromoform	ug/L	ND	20	20	16.3	14.7	81	73	61.1-120	11				
Bromomethane	ug/L	ND	20	20	22.0	20.3	110	102	10.6-200	8				
Carbon disulfide	ug/L	ND	20	20	27.1	26.1	135	130	60.2-122	4	M0			
Carbon tetrachloride	ug/L	ND	20	20	19.6	17.1	98	86	60.1-127	13				
Chlorobenzene	ug/L	ND	20	20	19.3	17.8	96	89	72-120	8				
Chloroethane	ug/L	ND	20	20	27.3	27.1	137	136	36.8-142	.7				
Chloroform	ug/L	ND	20	20	20.6	17.2	103	86	69-122	18				
Chloromethane	ug/L	ND	20	20	25.9	28.0	129	140	37.2-129	8	M0			
cis-1,2-Dichloroethene	ug/L	ND	20	20	21.5	18.1	108	91	69.5-123	17				
cis-1,3-Dichloropropene	ug/L	ND	20	20	19.3	16.5	96	83	74.3-120	15				
Dibromochloromethane	ug/L	ND	20	20	18.3	16.2	92	81	66.1-120	12				
Ethylbenzene	ug/L	ND	20	20	20.2	18.3	101	91	70.9-124	10				
Isopropylbenzene (Cumene)	ug/L	ND	20	20	21.0	19.8	105	99	68.3-129	6				
m&p-Xylene	ug/L	ND	40	40	39.7	36.9	99	92	70.4-130	7				
Methylene Chloride	ug/L	ND	20	20	18.3	14.9	92	75	61.5-125	20				
o-Xylene	ug/L	ND	20	20	20.1	18.6	100	93	70.6-127	8				
Styrene	ug/L	ND	20	20	19.2	18.3	96	91	69.9-120	5				
Tetrachloroethene	ug/L	ND	20	20	18.6	17.5	93	87	63.4-121	6				
Toluene	ug/L	ND	20	20	21.1	18.8	105	94	71.5-120	11				
trans-1,2-Dichloroethene	ug/L	ND	20	20	20.5	17.0	103	85	64.1-120	19				
trans-1,3-Dichloropropene	ug/L	ND	20	20	19.3	16.5	96	83	71-120	15				
Trichloroethene	ug/L	ND	20	20	19.5	17.5	98	88	65.9-120	11				
Trichlorofluoromethane	ug/L	ND	20	20	26.4	26.0	132	130	44.8-137	2				
Vinyl chloride	ug/L	ND	20	20	28.1	28.2	140	141	51-127	.7	M0			
1,2-Dichloroethane-d4 (S)	%						99	95	70-130					
4-Bromofluorobenzene (S)	%						98	97	70-130					
Toluene-d8 (S)	%						101	101	70-130					

## QUALIFIERS

Project: 41569181.10000 Essex-Hope  
Pace Project No.: 3071297

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

- |    |   |
|----|---|
| CU | The continuing calibration for this compound is outside of Pace Analytical acceptance limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias. |
| L1 | Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.   |
| L3 | Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.                   |
| M0 | Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.   |

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 41569181.10000 Essex-Hope

Pace Project No.: 3071297

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Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3071297001	RW-2D	EPA 8260	MSV/13075		
3071297002	RW-2S	EPA 8260	MSV/13075		
3071297003	RW-3S	EPA 8260	MSV/13075		
3071297004	RW-1S	EPA 8260	MSV/13075		



# CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b> Required Client Information: Company: <b>URS CORP</b> Address: <b>FOSTER PLAZA 4</b> <b>501 HOLIDAY DR. STE 3000</b> <b>PITTSBURGH, PA 15220</b> Email To: _____		<b>Section B</b> Project Information: Report To: <b>MARY DOWIAK</b> Copy To: <b>VALERIE SIBETO</b> Purchase Order No.: <b>41529081</b> Project Name: <b>ESSEX/HOPE DAMSDOWN</b> Project Number: <b>41529081.1000</b>		<b>Section C</b> Invoice Information: Attention: Company Name: Address: Pace Quote Reference: Pace Project Manager: Pace Profile #:		Page: _____ of _____
Phone: <b>412-503-4700</b> Requested Due Date/TAT: <b>STANDARD</b>		Regulatory Agency: _____ <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____		Site Location: _____ STATE: <b>NY</b>		1492352

ITEM #	Matrix Codes MATRIX / CODE	Required Client Information	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives				Analysis Test ↑ Y/N ↓	Requested Analysis Filtered (Y/N)	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)	
			COMPOSITE START	COMPOSITE END/GRAB			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl							NaOH
1	RW-2D		DATE	TIME	DATE	TIME											
2	RW-2S		DATE	TIME	DATE	TIME											
3	RW-3S		DATE	TIME	DATE	TIME											
4	RW-1S		DATE	TIME	DATE	TIME											
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

ADDITIONAL COMMENTS: <b>SEMI-ANNUAL RW</b> <b>SAMPLING - NOTE:</b> <b>RW-LID SAMPLED</b> <b>W POST-1500 ROUNDS</b>	RELINQUISHED BY / AFFILIATION: <i>Valerie Sibeto</i> / URS DATE: 6-12-12 ~ 1405 <i>Valerie Sibeto</i> DATE: 6/13/12 0800 4.3	ACCEPTED BY / AFFILIATION: <i>Valerie Sibeto</i> DATE: 6-12-12 ~ 1405 <i>Valerie Sibeto</i> DATE: 6/13/12 0800 4.3	SAMPLE CONDITIONS: Received on Ice (Y/N): Y Custody Sealed Cooler (Y/N): N Samples Intact (Y/N): Y
--	--	--	---

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: **VALERIE SIBETO**      DATE Signed (MM/DD/YY): **6-12-12**

SIGNATURE of SAMPLER: *Valerie Sibeto*

ORIGINAL

\*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.



Sample Condition Upon Receipt

Client Name: WRS

Project # 3071297

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

Tracking #: 872640256919

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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used (5) 6 7

Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 4.3

Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Optional  
Proj. Due Date:  
Proj. Name:

Date and Initials of person examining contents: VE 6/13/12

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

Client Notification/ Resolution:

Field Data Required? Y / N

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

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

Project Manager Review: [Signature]

Date: 6/14/12

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)



Project Number: 3071297

Client Name: VAR

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500 )	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	N	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem NaIgene (125 / 250 / 500 / 1L)	Radchem NaIgene (1/2 gal / 1 galL)	Cubtainer (500 ml / 4L)	Ziploc	Other	Other	
100	PM																									
100	PM																									

## ANALYTICAL RESULTS

Project: 41569123/Essex-Hope

Pace Project No.: 3071263

Sample: RW-6D	Lab ID: 3071263007	Collected: 06/12/12 13:30	Received: 06/13/12 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010B Preparation Method: EPA 3005						
Iron	11900 ug/L		70.0	1	06/14/12 15:49	06/15/12 13:31	7439-89-6	
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	20600 ug/L		2000	200		06/18/12 16:50	67-64-1	
Benzene	23.9 ug/L		1.0	1		06/15/12 17:01	71-43-2	
Bromodichloromethane	ND ug/L		5.0	1		06/15/12 17:01	75-27-4	
Bromoform	ND ug/L		5.0	1		06/15/12 17:01	75-25-2	
Bromomethane	ND ug/L		5.0	1		06/15/12 17:01	74-83-9	
2-Butanone (MEK)	259 ug/L		10.0	1		06/15/12 17:01	78-93-3	
Carbon disulfide	ND ug/L		5.0	1		06/15/12 17:01	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	1		06/15/12 17:01	56-23-5	
Chlorobenzene	ND ug/L		5.0	1		06/15/12 17:01	108-90-7	
Chloroethane	ND ug/L		5.0	1		06/15/12 17:01	75-00-3	
Chloroform	ND ug/L		5.0	1		06/15/12 17:01	67-66-3	
Chloromethane	ND ug/L		5.0	1		06/15/12 17:01	74-87-3	
Dibromochloromethane	ND ug/L		5.0	1		06/15/12 17:01	124-48-1	
1,2-Dichlorobenzene	ND ug/L		5.0	1		06/15/12 17:01	95-50-1	
1,3-Dichlorobenzene	ND ug/L		5.0	1		06/15/12 17:01	541-73-1	
1,4-Dichlorobenzene	ND ug/L		5.0	1		06/15/12 17:01	106-46-7	
1,1-Dichloroethane	ND ug/L		5.0	1		06/15/12 17:01	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	1		06/15/12 17:01	107-06-2	
1,1-Dichloroethene	28.9 ug/L		5.0	1		06/15/12 17:01	75-35-4	
cis-1,2-Dichloroethene	16700 ug/L		1000	200		06/18/12 16:50	156-59-2	
trans-1,2-Dichloroethene	181 ug/L		5.0	1		06/15/12 17:01	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	1		06/15/12 17:01	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		5.0	1		06/15/12 17:01	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		5.0	1		06/15/12 17:01	10061-02-6	
Ethylbenzene	ND ug/L		5.0	1		06/15/12 17:01	100-41-4	
2-Hexanone	ND ug/L		10.0	1		06/15/12 17:01	591-78-6	
Isopropylbenzene (Cumene)	ND ug/L		1.0	1		06/15/12 17:01	98-82-8	
Methylene Chloride	ND ug/L		5.0	1		06/15/12 17:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	1		06/15/12 17:01	108-10-1	
Styrene	ND ug/L		5.0	1		06/15/12 17:01	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/L		5.0	1		06/15/12 17:01	79-34-5	
Tetrachloroethene	ND ug/L		5.0	1		06/15/12 17:01	127-18-4	
Toluene	ND ug/L		5.0	1		06/15/12 17:01	108-88-3	
1,1,1-Trichloroethane	ND ug/L		5.0	1		06/15/12 17:01	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	1		06/15/12 17:01	79-00-5	
Trichloroethene	3900 ug/L		1000	200		06/18/12 16:50	79-01-6	
Trichlorofluoromethane	ND ug/L		5.0	1		06/15/12 17:01	75-69-4	
Vinyl chloride	3390 ug/L		200	200		06/18/12 16:50	75-01-4	
m&p-Xylene	ND ug/L		5.0	1		06/15/12 17:01	179601-23-1	
o-Xylene	ND ug/L		5.0	1		06/15/12 17:01	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	98 %		70-130	1		06/15/12 17:01	460-00-4	
1,2-Dichloroethane-d4 (S)	103 %		70-130	1		06/15/12 17:01	17060-07-0	
Toluene-d8 (S)	102 %		70-130	1		06/15/12 17:01	2037-26-5	



## ANALYTICAL RESULTS

Project: 41569123/Essex-Hope

Pace Project No.: 3071263

<b>Sample: RW-6D</b>		<b>Lab ID: 3071263007</b>	Collected: 06/12/12 13:30	Received: 06/13/12 09:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B						
Alkalinity, Total as CaCO <sub>3</sub>	<b>477</b>	mg/L	10.0	1		06/15/12 17:30		
<b>Iron, Ferric (Calculation)</b>		Analytical Method: SM 3500-Fe D#4						
Iron, Ferric	<b>8.9</b>	mg/L	0.10	1		06/27/12 14:50	7439-89-6	N2
<b>Iron, Ferrous</b>		Analytical Method: SM 3500-Fe D#4						
Iron, Ferrous	<b>2.9</b>	mg/L	0.10	1		06/13/12 14:51		H1,H6
<b>4500S2F Sulfide, Iodometric</b>		Analytical Method: SM 4500-S F (2000)						
Sulfide	ND	mg/L	1.0	1		06/14/12 21:02	18496-25-8	
<b>ASTM D516-9002 Sulfate Water</b>		Analytical Method: ASTM D516-90,02						
Sulfate	ND	mg/L	10.0	1		06/19/12 11:39	14808-79-8	

January 23, 2012

Mr. Mark Dowiak  
URS Corporation  
Foster Plaza 4  
501 Holiday Drive, Suite 300  
Pittsburgh, PA 15220

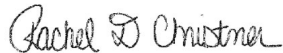
RE: Project: 41569181.100000 Essex/Hope  
Pace Project No.: 3061307

Dear Mr. Dowiak:

Enclosed are the analytical results for sample(s) received by the laboratory on January 18, 2012. 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.

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

Sincerely,



Rachel Christner

rachel.christner@pacelabs.com  
Project Manager

Enclosures

cc: Ms. Valerie Sibeto, URS Corporation



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 41569181.100000 Essex/Hope

Pace Project No.: 3061307

### Pennsylvania Certification IDs

1638 Roseytown Road Suites 2,3&4, Greensburg, PA 15601

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/NELAC Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/NELAC Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/NELAC Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/NELAC Certification #: LA080002

Louisiana/NELAC Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

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North Carolina Certification #: 42706

Oregon/NELAC Certification #: PA200002

Pennsylvania/NELAC Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/NELAC Certification #: T104704188-09 TX

Utah/NELAC Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Virginia VELAP (Cert # 460198)

Washington Certification #: C1941

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

## REPORT OF LABORATORY ANALYSIS

## ANALYTICAL RESULTS

Project: 41569181.100000 Essex/Hope

Pace Project No.: 3061307

Sample: PRE-CARB		Lab ID: 3061307001	Collected: 01/17/12 11:20	Received: 01/18/12 09:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		01/20/12 15:19	67-64-1	
Benzene	4.0	ug/L	1.0	1		01/20/12 15:19	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		01/20/12 15:19	75-27-4	
Bromoform	ND	ug/L	5.0	1		01/20/12 15:19	75-25-2	
Bromomethane	ND	ug/L	5.0	1		01/20/12 15:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		01/20/12 15:19	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		01/20/12 15:19	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		01/20/12 15:19	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		01/20/12 15:19	108-90-7	
Chloroethane	ND	ug/L	5.0	1		01/20/12 15:19	75-00-3	
Chloroform	ND	ug/L	5.0	1		01/20/12 15:19	67-66-3	
Chloromethane	ND	ug/L	5.0	1		01/20/12 15:19	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		01/20/12 15:19	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		01/20/12 15:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		01/20/12 15:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		01/20/12 15:19	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		01/20/12 15:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		01/20/12 15:19	107-06-2	
1,1-Dichloroethene	10.9	ug/L	5.0	1		01/20/12 15:19	75-35-4	
cis-1,2-Dichloroethene	2800	ug/L	100	20		01/20/12 15:43	156-59-2	
trans-1,2-Dichloroethene	56.2	ug/L	5.0	1		01/20/12 15:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		01/20/12 15:19	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		01/20/12 15:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		01/20/12 15:19	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		01/20/12 15:19	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		01/20/12 15:19	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		01/20/12 15:19	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		01/20/12 15:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		01/20/12 15:19	108-10-1	
Styrene	ND	ug/L	5.0	1		01/20/12 15:19	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		01/20/12 15:19	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		01/20/12 15:19	127-18-4	
Toluene	ND	ug/L	5.0	1		01/20/12 15:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		01/20/12 15:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		01/20/12 15:19	79-00-5	
Trichloroethene	476	ug/L	100	20		01/20/12 15:43	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		01/20/12 15:19	75-69-4	
Vinyl chloride	346	ug/L	1.0	1		01/20/12 15:19	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		01/20/12 15:19	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		01/20/12 15:19	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	105 %		70-130	1		01/20/12 15:19	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		70-130	1		01/20/12 15:19	17060-07-0	
Toluene-d8 (S)	92 %		70-130	1		01/20/12 15:19	2037-26-5	

## ANALYTICAL RESULTS

Project: 41569181.100000 Essex/Hope

Pace Project No.: 3061307

Sample: PRIMARY-EFF	Lab ID: 3061307002	Collected: 01/17/12 11:25	Received: 01/18/12 09:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		01/20/12 16:07	67-64-1	
Benzene	ND	ug/L	1.0	1		01/20/12 16:07	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		01/20/12 16:07	75-27-4	
Bromoform	ND	ug/L	5.0	1		01/20/12 16:07	75-25-2	
Bromomethane	ND	ug/L	5.0	1		01/20/12 16:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		01/20/12 16:07	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		01/20/12 16:07	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		01/20/12 16:07	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		01/20/12 16:07	108-90-7	
Chloroethane	ND	ug/L	5.0	1		01/20/12 16:07	75-00-3	
Chloroform	ND	ug/L	5.0	1		01/20/12 16:07	67-66-3	
Chloromethane	ND	ug/L	5.0	1		01/20/12 16:07	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		01/20/12 16:07	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		01/20/12 16:07	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		01/20/12 16:07	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		01/20/12 16:07	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		01/20/12 16:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		01/20/12 16:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		01/20/12 16:07	75-35-4	
cis-1,2-Dichloroethene	12.5	ug/L	5.0	1		01/20/12 16:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		01/20/12 16:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		01/20/12 16:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		01/20/12 16:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		01/20/12 16:07	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		01/20/12 16:07	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		01/20/12 16:07	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		01/20/12 16:07	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		01/20/12 16:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		01/20/12 16:07	108-10-1	
Styrene	ND	ug/L	5.0	1		01/20/12 16:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		01/20/12 16:07	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		01/20/12 16:07	127-18-4	
Toluene	ND	ug/L	5.0	1		01/20/12 16:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		01/20/12 16:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		01/20/12 16:07	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		01/20/12 16:07	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		01/20/12 16:07	75-69-4	
Vinyl chloride	564	ug/L	20.0	20		01/20/12 16:31	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		01/20/12 16:07	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		01/20/12 16:07	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	107	%	70-130	1		01/20/12 16:07	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130	1		01/20/12 16:07	17060-07-0	
Toluene-d8 (S)	93	%	70-130	1		01/20/12 16:07	2037-26-5	

## ANALYTICAL RESULTS

Project: 41569181.100000 Essex/Hope

Pace Project No.: 3061307

**Sample: POST-CARB**      **Lab ID: 3061307003**      Collected: 01/17/12 13:00      Received: 01/18/12 09:45      Matrix: Water

Comments: • Grab samples taken at 11:30, 12:00, 12:30, and 13:00. Compositied in laboratory prior to analysis.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		01/20/12 16:56	67-64-1	
Benzene	ND	ug/L	1.0	1		01/20/12 16:56	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		01/20/12 16:56	75-27-4	
Bromoform	ND	ug/L	5.0	1		01/20/12 16:56	75-25-2	
Bromomethane	ND	ug/L	5.0	1		01/20/12 16:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		01/20/12 16:56	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		01/20/12 16:56	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		01/20/12 16:56	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		01/20/12 16:56	108-90-7	
Chloroethane	ND	ug/L	5.0	1		01/20/12 16:56	75-00-3	
Chloroform	ND	ug/L	5.0	1		01/20/12 16:56	67-66-3	
Chloromethane	ND	ug/L	5.0	1		01/20/12 16:56	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		01/20/12 16:56	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		01/20/12 16:56	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		01/20/12 16:56	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		01/20/12 16:56	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		01/20/12 16:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		01/20/12 16:56	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		01/20/12 16:56	75-35-4	
cis-1,2-Dichloroethene	<b>255</b>	ug/L	5.0	1		01/20/12 16:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		01/20/12 16:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		01/20/12 16:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		01/20/12 16:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		01/20/12 16:56	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		01/20/12 16:56	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		01/20/12 16:56	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		01/20/12 16:56	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		01/20/12 16:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		01/20/12 16:56	108-10-1	
Styrene	ND	ug/L	5.0	1		01/20/12 16:56	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		01/20/12 16:56	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		01/20/12 16:56	127-18-4	
Toluene	ND	ug/L	5.0	1		01/20/12 16:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		01/20/12 16:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		01/20/12 16:56	79-00-5	
Trichloroethene	<b>7.2</b>	ug/L	5.0	1		01/20/12 16:56	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		01/20/12 16:56	75-69-4	
Vinyl chloride	<b>119</b>	ug/L	1.0	1		01/20/12 16:56	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		01/20/12 16:56	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		01/20/12 16:56	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	108 %		70-130	1		01/20/12 16:56	460-00-4	
1,2-Dichloroethane-d4 (S)	100 %		70-130	1		01/20/12 16:56	17060-07-0	
Toluene-d8 (S)	91 %		70-130	1		01/20/12 16:56	2037-26-5	

## ANALYTICAL RESULTS

Project: 41569181.100000 Essex/Hope

Pace Project No.: 3061307

Sample: TB-01		Lab ID: 3061307004	Collected: 01/17/12 00:01	Received: 01/18/12 09:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		01/20/12 12:53	67-64-1	
Benzene	ND	ug/L	1.0	1		01/20/12 12:53	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		01/20/12 12:53	75-27-4	
Bromoform	ND	ug/L	5.0	1		01/20/12 12:53	75-25-2	
Bromomethane	ND	ug/L	5.0	1		01/20/12 12:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		01/20/12 12:53	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		01/20/12 12:53	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		01/20/12 12:53	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		01/20/12 12:53	108-90-7	
Chloroethane	ND	ug/L	5.0	1		01/20/12 12:53	75-00-3	
Chloroform	ND	ug/L	5.0	1		01/20/12 12:53	67-66-3	
Chloromethane	ND	ug/L	5.0	1		01/20/12 12:53	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		01/20/12 12:53	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		01/20/12 12:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		01/20/12 12:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		01/20/12 12:53	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		01/20/12 12:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		01/20/12 12:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		01/20/12 12:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		01/20/12 12:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		01/20/12 12:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		01/20/12 12:53	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		01/20/12 12:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		01/20/12 12:53	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		01/20/12 12:53	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		01/20/12 12:53	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		01/20/12 12:53	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		01/20/12 12:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		01/20/12 12:53	108-10-1	
Styrene	ND	ug/L	5.0	1		01/20/12 12:53	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		01/20/12 12:53	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		01/20/12 12:53	127-18-4	
Toluene	ND	ug/L	5.0	1		01/20/12 12:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		01/20/12 12:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		01/20/12 12:53	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		01/20/12 12:53	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		01/20/12 12:53	75-69-4	
Vinyl chloride	ND	ug/L	1.0	1		01/20/12 12:53	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		01/20/12 12:53	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		01/20/12 12:53	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	110 %		70-130	1		01/20/12 12:53	460-00-4	
1,2-Dichloroethane-d4 (S)	96 %		70-130	1		01/20/12 12:53	17060-07-0	
Toluene-d8 (S)	92 %		70-130	1		01/20/12 12:53	2037-26-5	

### QUALITY CONTROL DATA

Project: 41569181.100000 Essex/Hope

Pace Project No.: 3061307

QC Batch: MSV/11731 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 3061307001, 3061307002, 3061307003, 3061307004

METHOD BLANK: 394067 Matrix: Water  
Associated Lab Samples: 3061307001, 3061307002, 3061307003, 3061307004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	01/20/12 12:05	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	01/20/12 12:05	
1,1,2-Trichloroethane	ug/L	ND	5.0	01/20/12 12:05	
1,1-Dichloroethane	ug/L	ND	5.0	01/20/12 12:05	
1,1-Dichloroethene	ug/L	ND	5.0	01/20/12 12:05	
1,2-Dichlorobenzene	ug/L	ND	5.0	01/20/12 12:05	
1,2-Dichloroethane	ug/L	ND	5.0	01/20/12 12:05	
1,2-Dichloropropane	ug/L	ND	5.0	01/20/12 12:05	
1,3-Dichlorobenzene	ug/L	ND	5.0	01/20/12 12:05	
1,4-Dichlorobenzene	ug/L	ND	5.0	01/20/12 12:05	
2-Butanone (MEK)	ug/L	ND	10.0	01/20/12 12:05	
2-Hexanone	ug/L	ND	10.0	01/20/12 12:05	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	01/20/12 12:05	
Acetone	ug/L	ND	10.0	01/20/12 12:05	
Benzene	ug/L	ND	1.0	01/20/12 12:05	
Bromodichloromethane	ug/L	ND	5.0	01/20/12 12:05	
Bromoform	ug/L	ND	5.0	01/20/12 12:05	
Bromomethane	ug/L	ND	5.0	01/20/12 12:05	
Carbon disulfide	ug/L	ND	5.0	01/20/12 12:05	
Carbon tetrachloride	ug/L	ND	5.0	01/20/12 12:05	
Chlorobenzene	ug/L	ND	5.0	01/20/12 12:05	
Chloroethane	ug/L	ND	5.0	01/20/12 12:05	
Chloroform	ug/L	ND	5.0	01/20/12 12:05	
Chloromethane	ug/L	ND	5.0	01/20/12 12:05	
cis-1,2-Dichloroethene	ug/L	ND	5.0	01/20/12 12:05	
cis-1,3-Dichloropropene	ug/L	ND	5.0	01/20/12 12:05	
Dibromochloromethane	ug/L	ND	5.0	01/20/12 12:05	
Ethylbenzene	ug/L	ND	5.0	01/20/12 12:05	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	01/20/12 12:05	
m&p-Xylene	ug/L	ND	5.0	01/20/12 12:05	
Methylene Chloride	ug/L	ND	5.0	01/20/12 12:05	
o-Xylene	ug/L	ND	5.0	01/20/12 12:05	
Styrene	ug/L	ND	5.0	01/20/12 12:05	
Tetrachloroethene	ug/L	ND	5.0	01/20/12 12:05	
Toluene	ug/L	ND	5.0	01/20/12 12:05	
trans-1,2-Dichloroethene	ug/L	ND	5.0	01/20/12 12:05	
trans-1,3-Dichloropropene	ug/L	ND	5.0	01/20/12 12:05	
Trichloroethene	ug/L	ND	5.0	01/20/12 12:05	
Trichlorofluoromethane	ug/L	ND	5.0	01/20/12 12:05	
Vinyl chloride	ug/L	ND	1.0	01/20/12 12:05	
1,2-Dichloroethane-d4 (S)	%	96	70-130	01/20/12 12:05	
4-Bromofluorobenzene (S)	%	108	70-130	01/20/12 12:05	
Toluene-d8 (S)	%	91	70-130	01/20/12 12:05	

Date: 01/23/2012 01:58 PM

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 41569181.100000 Essex/Hope

Pace Project No.: 3061307

LABORATORY CONTROL SAMPLE: 394068

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.2	101	64.3-127	
1,1,2,2-Tetrachloroethane	ug/L	20	17.6	88	64.6-121	
1,1,2-Trichloroethane	ug/L	20	18.5	92	75.6-120	
1,1-Dichloroethane	ug/L	20	19.7	98	68.5-122	
1,1-Dichloroethene	ug/L	20	18.9	95	57.1-120	
1,2-Dichlorobenzene	ug/L	20	19.3	96	69.6-120	
1,2-Dichloroethane	ug/L	20	18.8	94	60.5-133	
1,2-Dichloropropane	ug/L	20	17.5	88	71-120	
1,3-Dichlorobenzene	ug/L	20	19.1	96	68.4-121	
1,4-Dichlorobenzene	ug/L	20	19.1	96	68.5-123	
2-Butanone (MEK)	ug/L	20	20.3	102	55.7-138	
2-Hexanone	ug/L	20	17.8	89	67-133	
4-Methyl-2-pentanone (MIBK)	ug/L	20	18.7	94	64.5-121	
Acetone	ug/L	20	22.0	110	57.6-168	
Benzene	ug/L	20	18.2	91	69.8-120	
Bromodichloromethane	ug/L	20	16.5	83	66.5-120	
Bromoform	ug/L	20	15.5	78	61.1-120	
Bromomethane	ug/L	20	28.6	143	10.6-200	
Carbon disulfide	ug/L	20	20.8	104	60.2-122	
Carbon tetrachloride	ug/L	20	18.1	91	60.1-127	
Chlorobenzene	ug/L	20	19.9	99	72-120	
Chloroethane	ug/L	20	17.8	89	36.8-142	
Chloroform	ug/L	20	19.6	98	69-122	
Chloromethane	ug/L	20	12.9	65	37.2-129	
cis-1,2-Dichloroethene	ug/L	20	19.5	97	69.5-123	
cis-1,3-Dichloropropene	ug/L	20	16.7	84	74.3-120	
Dibromochloromethane	ug/L	20	16.8	84	66.1-120	
Ethylbenzene	ug/L	20	20.2	101	70.9-124	
Isopropylbenzene (Cumene)	ug/L	20	19.7	99	68.3-129	
m&p-Xylene	ug/L	40	41.5	104	70.4-130	
Methylene Chloride	ug/L	20	16.8	84	61.5-125	
o-Xylene	ug/L	20	19.5	98	70.6-127	
Styrene	ug/L	20	18.7	94	69.9-120	
Tetrachloroethene	ug/L	20	19.9	100	63.4-121	
Toluene	ug/L	20	19.3	96	71.5-120	
trans-1,2-Dichloroethene	ug/L	20	18.8	94	64.1-120	
trans-1,3-Dichloropropene	ug/L	20	16.7	84	71-120	
Trichloroethene	ug/L	20	18.8	94	65.9-120	
Trichlorofluoromethane	ug/L	20	19.1	95	44.8-137	
Vinyl chloride	ug/L	20	16.4	82	51-127	
1,2-Dichloroethane-d4 (S)	%			98	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			95	70-130	

### QUALITY CONTROL DATA

Project: 41569181.100000 Essex/Hope

Pace Project No.: 3061307

Parameter	Units	3061025002		394143		394144		% Rec	% Rec	Limits	RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
1,1,1-Trichloroethane	ug/L	ND	20	20	24.3	21.0	122	105	64.3-127	15		
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	19.5	16.8	97	84	64.6-121	14		
1,1,2-Trichloroethane	ug/L	ND	20	20	20.5	17.9	102	89	75.6-120	14		
1,1-Dichloroethane	ug/L	ND	20	20	23.1	19.7	116	98	68.5-122	16		
1,1-Dichloroethene	ug/L	ND	20	20	23.5	19.7	118	98	57.1-120	18		
1,2-Dichlorobenzene	ug/L	ND	20	20	21.5	18.4	107	92	69.6-120	15		
1,2-Dichloroethane	ug/L	ND	20	20	21.6	18.7	108	94	60.5-133	14		
1,2-Dichloropropane	ug/L	ND	20	20	19.6	16.5	98	83	71-120	17		
1,3-Dichlorobenzene	ug/L	ND	20	20	21.3	18.4	107	92	68.4-121	15		
1,4-Dichlorobenzene	ug/L	ND	20	20	21.4	18.2	107	91	68.5-123	16		
2-Butanone (MEK)	ug/L	ND	20	20	21.0	22.2	102	108	55.7-138	6		
2-Hexanone	ug/L	ND	20	20	17.6	18.5	88	92	67-133	5		
4-Methyl-2-pentanone (MIBK)	ug/L	ND	20	20	19.6	20.2	98	101	64.5-121	3		
Acetone	ug/L	ND	20	20	21.6	22.2	94	97	57.6-168	3		
Benzene	ug/L	ND	20	20	20.7	17.7	103	88	69.8-120	16		
Bromodichloromethane	ug/L	ND	20	20	18.3	15.8	91	79	66.5-120	15		
Bromoform	ug/L	ND	20	20	17.4	15.7	87	79	61.1-120	10		
Bromomethane	ug/L	ND	20	20	25.7	27.9	128	139	10.6-200	8		
Carbon disulfide	ug/L	ND	20	20	21.6	22.9	108	115	60.2-122	6		
Carbon tetrachloride	ug/L	ND	20	20	20.3	18.5	102	93	60.1-127	9		
Chlorobenzene	ug/L	ND	20	20	22.2	19.4	111	97	72-120	13		
Chloroethane	ug/L	ND	20	20	20.2	21.3	101	106	36.8-142	5		
Chloroform	ug/L	ND	20	20	23.0	20.0	115	100	69-122	14		
Chloromethane	ug/L	ND	20	20	14.5	15.8	72	79	37.2-129	9		
cis-1,2-Dichloroethene	ug/L	ND	20	20	22.8	19.5	114	98	69.5-123	16		
cis-1,3-Dichloropropene	ug/L	ND	20	20	18.5	16.0	93	80	74.3-120	15		
Dibromochloromethane	ug/L	ND	20	20	18.7	16.4	94	82	66.1-120	13		
Ethylbenzene	ug/L	ND	20	20	22.3	19.7	112	99	70.9-124	12		
Isopropylbenzene (Cumene)	ug/L	ND	20	20	22.3	19.5	112	97	68.3-129	14		
m&p-Xylene	ug/L	ND	40	40	46.5	41.2	116	103	70.4-130	12		
Methylene Chloride	ug/L	ND	20	20	19.2	16.3	96	81	61.5-125	16		
o-Xylene	ug/L	ND	20	20	21.8	19.1	109	96	70.6-127	13		
Styrene	ug/L	ND	20	20	20.2	18.2	101	91	69.9-120	11		
Tetrachloroethene	ug/L	ND	20	20	23.1	20.2	115	101	63.4-121	13		
Toluene	ug/L	ND	20	20	22.0	19.0	110	95	71.5-120	15		
trans-1,2-Dichloroethene	ug/L	ND	20	20	21.9	19.1	109	95	64.1-120	14		
trans-1,3-Dichloropropene	ug/L	ND	20	20	18.5	16.0	93	80	71-120	15		
Trichloroethene	ug/L	ND	20	20	21.4	18.6	107	93	65.9-120	14		
Trichlorofluoromethane	ug/L	ND	20	20	21.9	24.0	110	120	44.8-137	9		
Vinyl chloride	ug/L	ND	20	20	18.3	20.3	91	101	51-127	10		
1,2-Dichloroethane-d4 (S)	%						99	101	70-130			
4-Bromofluorobenzene (S)	%						98	99	70-130			
Toluene-d8 (S)	%						93	92	70-130			

## QUALIFIERS

Project: 41569181.100000 Essex/Hope

Pace Project No.: 3061307

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 41569181.100000 Essex/Hope

Pace Project No.: 3061307

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3061307001	PRE-CARB	EPA 8260	MSV/11731		
3061307002	PRIMARY-EFF	EPA 8260	MSV/11731		
3061307003	POST-CARB	EPA 8260	MSV/11731		
3061307004	TB-01	EPA 8260	MSV/11731		



# CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company: <b>URS CORP</b>	Report To: <b>MARK DOWIAK</b>	Attention:	Company Name:	Page: <b>1</b> of <b>1</b>	Invoice No: <b>1359886</b>
Address: <b>FOSTER PLAZA 4, 501 HOLIDAY DR., STE. 200, PITTSBURGH, PA 15220</b>	Copy To: <b>VALERIE SIBETO</b>	Company Address:	Address:	REGULATORY AGENCY	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER
Project Number: <b>4125034701</b>	Purchase Order No.: <b>41569181</b>	Pace Quote Reference:	Pace Project Manager:	<input type="checkbox"/> UST <input type="checkbox"/> RCRA	Site Location STATE: <b>NY</b>
Requested Due Date/TAT: <b>5/24/2008</b>	Project Name: <b>ESSEX/HOPE JAYESTOWN</b>	Pace Profile #:			

ITEM #	SAMPLE ID (A-Z, 0-9 / -)	Matrix Codes MATRIX / CODE	Matrix Codes DW WT WW P SL OL WP AR TS OT	SAMPLE TYPE (G=GRAB Q=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives Unpreserved H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> HCl NaOH Na <sub>2</sub> O <sub>2</sub> Methanol Other	Analysis Test Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
					COMPOSITE START	COMPOSITE END/GRAB							
1	PRE-CARB			WTG	DATE: 1/17/12	TIME: 1120		3					001
2	PRIMARY-EFF				DATE: 1/17/12	TIME: 1125		3					002
3	POST-CARB				DATE: 1/17/12	TIME: 1130		3					003
4	POST-CARB				DATE: 1/17/12	TIME: 1200		3					
5	POST-CARB				DATE: 1/17/12	TIME: 1230		3					
6	POST-CARB				DATE: 1/17/12	TIME: 1300		3					
7	TB-DI				DATE: 1/17/12	TIME: -		2					004

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
COMPOSITE FOUR (4) POST-CARB SAMPLES IN LABS AND REPORT AS POST-CARB COMPOSITE	Valerie Sibeto	1-17-12	1330	Bob Exley	1-17-12	~1330	Received on Ice (Y/N) Sealed Cooler (Y/N) Custody (Y/N) Samples Intact (Y/N)
				Valerie	1-17-12	945	

SAMPLER NAME AND SIGNATURE: **VALERIE SIBETO**

PRINT Name of SAMPLER: **Valerie Sibeto**

SIGNATURE of SAMPLER: *Valerie Sibeto*

DATE Signed (MM/DD/YY): **1.17.12**



**Sample Condition Upon Receipt**

JMS

Client Name: URS

Project # 3061307

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

Tracking #: 872640756816

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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 3 5 6    Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 0.6    Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Optional  
Proj. Due Date:  
Proj. Name:  
Date and Initials of person examining contents: JMS 1-18-12

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

**Client Notification/ Resolution:** \_\_\_\_\_ Field Data Required? Y / N

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

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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Project Manager Review:** [Signature]    Date: 1/18/12

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)

February 23, 2012

Mr. Mark Dowiak  
URS Corporation  
Foster Plaza 4  
501 Holiday Drive, Suite 300  
Pittsburgh, PA 15220

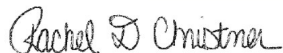
RE: Project: Essex/Hope Jamestown  
Pace Project No.: 3063297

Dear Mr. Dowiak:

Enclosed are the analytical results for sample(s) received by the laboratory on February 16, 2012. 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.

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

Sincerely,



Rachel Christner

rachel.christner@pacelabs.com  
Project Manager

Enclosures

cc: Ms. Valerie Sibeto, URS Corporation



## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

## CERTIFICATIONS

Project: Essex/Hope Jamestown  
Pace Project No.: 3063297

### Pennsylvania Certification IDs

1638 Roseytown Road Suites 2,3&4, Greensburg, PA 15601

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/NELAC Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/NELAC Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/NELAC Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/NELAC Certification #: LA080002

Louisiana/NELAC Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/NELAC Certification #: 2976

New Jersey/NELAC Certification #: PA 051

New Mexico Certification

New York/NELAC Certification #: 10888

North Carolina Certification #: 42706

Oregon/NELAC Certification #: PA200002

Pennsylvania/NELAC Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/NELAC Certification #: T104704188-09 TX

Utah/NELAC Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Virginia VELAP (Cert # 460198)

Washington Certification #: C1941

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q



## ANALYTICAL RESULTS

Project: Essex/Hope Jamestown

Pace Project No.: 3063297

Sample: PRE-CARB		Lab ID: 3063297001	Collected: 02/15/12 11:50	Received: 02/16/12 09:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		02/21/12 21:16	67-64-1	
Benzene	8.3	ug/L	1.0	1		02/21/12 21:16	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		02/21/12 21:16	75-27-4	
Bromoform	ND	ug/L	5.0	1		02/21/12 21:16	75-25-2	
Bromomethane	ND	ug/L	5.0	1		02/21/12 21:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		02/21/12 21:16	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		02/21/12 21:16	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		02/21/12 21:16	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		02/21/12 21:16	108-90-7	
Chloroethane	ND	ug/L	5.0	1		02/21/12 21:16	75-00-3	
Chloroform	ND	ug/L	5.0	1		02/21/12 21:16	67-66-3	
Chloromethane	ND	ug/L	5.0	1		02/21/12 21:16	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		02/21/12 21:16	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		02/21/12 21:16	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		02/21/12 21:16	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		02/21/12 21:16	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		02/21/12 21:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		02/21/12 21:16	107-06-2	
1,1-Dichloroethene	23.0	ug/L	5.0	1		02/21/12 21:16	75-35-4	
cis-1,2-Dichloroethene	5650	ug/L	100	20		02/21/12 21:42	156-59-2	
trans-1,2-Dichloroethene	87.5	ug/L	5.0	1		02/21/12 21:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		02/21/12 21:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		02/21/12 21:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		02/21/12 21:16	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		02/21/12 21:16	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		02/21/12 21:16	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		02/21/12 21:16	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		02/21/12 21:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		02/21/12 21:16	108-10-1	
Styrene	ND	ug/L	5.0	1		02/21/12 21:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		02/21/12 21:16	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		02/21/12 21:16	127-18-4	
Toluene	ND	ug/L	5.0	1		02/21/12 21:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		02/21/12 21:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		02/21/12 21:16	79-00-5	
Trichloroethene	649	ug/L	100	20		02/21/12 21:42	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		02/21/12 21:16	75-69-4	
Vinyl chloride	630	ug/L	20.0	20		02/21/12 21:42	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		02/21/12 21:16	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		02/21/12 21:16	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	99 %		70-130	1		02/21/12 21:16	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		70-130	1		02/21/12 21:16	17060-07-0	
Toluene-d8 (S)	93 %		70-130	1		02/21/12 21:16	2037-26-5	

## ANALYTICAL RESULTS

Project: Essex/Hope Jamestown

Pace Project No.: 3063297

Sample: PRIMARY-EFF		Lab ID: 3063297002	Collected: 02/15/12 11:55	Received: 02/16/12 09:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		02/21/12 20:23	67-64-1	
Benzene	ND	ug/L	1.0	1		02/21/12 20:23	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		02/21/12 20:23	75-27-4	
Bromoform	ND	ug/L	5.0	1		02/21/12 20:23	75-25-2	
Bromomethane	ND	ug/L	5.0	1		02/21/12 20:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		02/21/12 20:23	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		02/21/12 20:23	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		02/21/12 20:23	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		02/21/12 20:23	108-90-7	
Chloroethane	ND	ug/L	5.0	1		02/21/12 20:23	75-00-3	
Chloroform	ND	ug/L	5.0	1		02/21/12 20:23	67-66-3	
Chloromethane	ND	ug/L	5.0	1		02/21/12 20:23	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		02/21/12 20:23	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		02/21/12 20:23	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		02/21/12 20:23	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		02/21/12 20:23	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		02/21/12 20:23	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		02/21/12 20:23	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		02/21/12 20:23	75-35-4	
cis-1,2-Dichloroethene	15.1	ug/L	5.0	1		02/21/12 20:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		02/21/12 20:23	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		02/21/12 20:23	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		02/21/12 20:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		02/21/12 20:23	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		02/21/12 20:23	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		02/21/12 20:23	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		02/21/12 20:23	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		02/21/12 20:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		02/21/12 20:23	108-10-1	
Styrene	ND	ug/L	5.0	1		02/21/12 20:23	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		02/21/12 20:23	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		02/21/12 20:23	127-18-4	
Toluene	ND	ug/L	5.0	1		02/21/12 20:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		02/21/12 20:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		02/21/12 20:23	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		02/21/12 20:23	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		02/21/12 20:23	75-69-4	
Vinyl chloride	637	ug/L	20.0	20		02/21/12 20:50	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		02/21/12 20:23	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		02/21/12 20:23	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	96	%	70-130	1		02/21/12 20:23	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		02/21/12 20:23	17060-07-0	
Toluene-d8 (S)	96	%	70-130	1		02/21/12 20:23	2037-26-5	

## ANALYTICAL RESULTS

Project: Essex/Hope Jamestown

Pace Project No.: 3063297

**Sample: POST-CARB**      **Lab ID: 3063297003**      Collected: 02/15/12 13:30      Received: 02/16/12 09:30      Matrix: Water

Comments: • Post-Carb grabs for composite collected at 12:00, 12:30, 13:00, and 13:30

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		02/21/12 19:57	67-64-1	
Benzene	ND	ug/L	1.0	1		02/21/12 19:57	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		02/21/12 19:57	75-27-4	
Bromoform	ND	ug/L	5.0	1		02/21/12 19:57	75-25-2	
Bromomethane	ND	ug/L	5.0	1		02/21/12 19:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		02/21/12 19:57	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		02/21/12 19:57	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		02/21/12 19:57	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		02/21/12 19:57	108-90-7	
Chloroethane	ND	ug/L	5.0	1		02/21/12 19:57	75-00-3	
Chloroform	ND	ug/L	5.0	1		02/21/12 19:57	67-66-3	
Chloromethane	ND	ug/L	5.0	1		02/21/12 19:57	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		02/21/12 19:57	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		02/21/12 19:57	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		02/21/12 19:57	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		02/21/12 19:57	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		02/21/12 19:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		02/21/12 19:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		02/21/12 19:57	75-35-4	
cis-1,2-Dichloroethene	<b>268</b>	ug/L	5.0	1		02/21/12 19:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		02/21/12 19:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		02/21/12 19:57	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		02/21/12 19:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		02/21/12 19:57	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		02/21/12 19:57	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		02/21/12 19:57	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		02/21/12 19:57	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		02/21/12 19:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		02/21/12 19:57	108-10-1	
Styrene	ND	ug/L	5.0	1		02/21/12 19:57	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		02/21/12 19:57	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		02/21/12 19:57	127-18-4	
Toluene	ND	ug/L	5.0	1		02/21/12 19:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		02/21/12 19:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		02/21/12 19:57	79-00-5	
Trichloroethene	<b>9.5</b>	ug/L	5.0	1		02/21/12 19:57	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		02/21/12 19:57	75-69-4	
Vinyl chloride	<b>495</b>	ug/L	10.0	10		02/22/12 16:26	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		02/21/12 19:57	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		02/21/12 19:57	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101	%	70-130	1		02/21/12 19:57	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130	1		02/21/12 19:57	17060-07-0	
Toluene-d8 (S)	110	%	70-130	1		02/21/12 19:57	2037-26-5	

## ANALYTICAL RESULTS

Project: Essex/Hope Jamestown  
Pace Project No.: 3063297

Sample: TB-01	Lab ID: 3063297004	Collected: 02/15/12 00:01	Received: 02/16/12 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND ug/L		10.0	1		02/21/12 14:14	67-64-1	
Benzene	ND ug/L		1.0	1		02/21/12 14:14	71-43-2	
Bromodichloromethane	ND ug/L		5.0	1		02/21/12 14:14	75-27-4	
Bromoform	ND ug/L		5.0	1		02/21/12 14:14	75-25-2	
Bromomethane	ND ug/L		5.0	1		02/21/12 14:14	74-83-9	
2-Butanone (MEK)	ND ug/L		10.0	1		02/21/12 14:14	78-93-3	
Carbon disulfide	ND ug/L		5.0	1		02/21/12 14:14	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	1		02/21/12 14:14	56-23-5	
Chlorobenzene	ND ug/L		5.0	1		02/21/12 14:14	108-90-7	
Chloroethane	ND ug/L		5.0	1		02/21/12 14:14	75-00-3	
Chloroform	ND ug/L		5.0	1		02/21/12 14:14	67-66-3	
Chloromethane	ND ug/L		5.0	1		02/21/12 14:14	74-87-3	
Dibromochloromethane	ND ug/L		5.0	1		02/21/12 14:14	124-48-1	
1,2-Dichlorobenzene	ND ug/L		5.0	1		02/21/12 14:14	95-50-1	
1,3-Dichlorobenzene	ND ug/L		5.0	1		02/21/12 14:14	541-73-1	
1,4-Dichlorobenzene	ND ug/L		5.0	1		02/21/12 14:14	106-46-7	
1,1-Dichloroethane	ND ug/L		5.0	1		02/21/12 14:14	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	1		02/21/12 14:14	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	1		02/21/12 14:14	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	1		02/21/12 14:14	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	1		02/21/12 14:14	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	1		02/21/12 14:14	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		5.0	1		02/21/12 14:14	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		5.0	1		02/21/12 14:14	10061-02-6	
Ethylbenzene	ND ug/L		5.0	1		02/21/12 14:14	100-41-4	
2-Hexanone	ND ug/L		10.0	1		02/21/12 14:14	591-78-6	
Isopropylbenzene (Cumene)	ND ug/L		1.0	1		02/21/12 14:14	98-82-8	
Methylene Chloride	ND ug/L		5.0	1		02/21/12 14:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	1		02/21/12 14:14	108-10-1	
Styrene	ND ug/L		5.0	1		02/21/12 14:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/L		5.0	1		02/21/12 14:14	79-34-5	
Tetrachloroethene	ND ug/L		5.0	1		02/21/12 14:14	127-18-4	
Toluene	ND ug/L		5.0	1		02/21/12 14:14	108-88-3	
1,1,1-Trichloroethane	ND ug/L		5.0	1		02/21/12 14:14	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	1		02/21/12 14:14	79-00-5	
Trichloroethene	ND ug/L		5.0	1		02/21/12 14:14	79-01-6	
Trichlorofluoromethane	ND ug/L		5.0	1		02/21/12 14:14	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		02/21/12 14:14	75-01-4	
m&p-Xylene	ND ug/L		5.0	1		02/21/12 14:14	179601-23-1	
o-Xylene	ND ug/L		5.0	1		02/21/12 14:14	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	97 %		70-130	1		02/21/12 14:14	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		70-130	1		02/21/12 14:14	17060-07-0	
Toluene-d8 (S)	101 %		70-130	1		02/21/12 14:14	2037-26-5	

### QUALITY CONTROL DATA

Project: Essex/Hope Jamestown  
Pace Project No.: 3063297

QC Batch: MSV/11992 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 3063297001, 3063297002, 3063297003, 3063297004

METHOD BLANK: 407095 Matrix: Water  
Associated Lab Samples: 3063297001, 3063297002, 3063297003, 3063297004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	02/21/12 12:03	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	02/21/12 12:03	
1,1,2-Trichloroethane	ug/L	ND	5.0	02/21/12 12:03	
1,1-Dichloroethane	ug/L	ND	5.0	02/21/12 12:03	
1,1-Dichloroethene	ug/L	ND	5.0	02/21/12 12:03	
1,2-Dichlorobenzene	ug/L	ND	5.0	02/21/12 12:03	
1,2-Dichloroethane	ug/L	ND	5.0	02/21/12 12:03	
1,2-Dichloropropane	ug/L	ND	5.0	02/21/12 12:03	
1,3-Dichlorobenzene	ug/L	ND	5.0	02/21/12 12:03	
1,4-Dichlorobenzene	ug/L	ND	5.0	02/21/12 12:03	
2-Butanone (MEK)	ug/L	ND	10.0	02/21/12 12:03	
2-Hexanone	ug/L	ND	10.0	02/21/12 12:03	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	02/21/12 12:03	
Acetone	ug/L	ND	10.0	02/21/12 12:03	
Benzene	ug/L	ND	1.0	02/21/12 12:03	
Bromodichloromethane	ug/L	ND	5.0	02/21/12 12:03	
Bromoform	ug/L	ND	5.0	02/21/12 12:03	
Bromomethane	ug/L	ND	5.0	02/21/12 12:03	
Carbon disulfide	ug/L	ND	5.0	02/21/12 12:03	
Carbon tetrachloride	ug/L	ND	5.0	02/21/12 12:03	
Chlorobenzene	ug/L	ND	5.0	02/21/12 12:03	
Chloroethane	ug/L	ND	5.0	02/21/12 12:03	
Chloroform	ug/L	ND	5.0	02/21/12 12:03	
Chloromethane	ug/L	ND	5.0	02/21/12 12:03	
cis-1,2-Dichloroethene	ug/L	ND	5.0	02/21/12 12:03	
cis-1,3-Dichloropropene	ug/L	ND	5.0	02/21/12 12:03	
Dibromochloromethane	ug/L	ND	5.0	02/21/12 12:03	
Ethylbenzene	ug/L	ND	5.0	02/21/12 12:03	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	02/21/12 12:03	
m&p-Xylene	ug/L	ND	5.0	02/21/12 12:03	
Methylene Chloride	ug/L	ND	5.0	02/21/12 12:03	
o-Xylene	ug/L	ND	5.0	02/21/12 12:03	
Styrene	ug/L	ND	5.0	02/21/12 12:03	
Tetrachloroethene	ug/L	ND	5.0	02/21/12 12:03	
Toluene	ug/L	ND	5.0	02/21/12 12:03	
trans-1,2-Dichloroethene	ug/L	ND	5.0	02/21/12 12:03	
trans-1,3-Dichloropropene	ug/L	ND	5.0	02/21/12 12:03	
Trichloroethene	ug/L	ND	5.0	02/21/12 12:03	
Trichlorofluoromethane	ug/L	ND	5.0	02/21/12 12:03	
Vinyl chloride	ug/L	ND	1.0	02/21/12 12:03	
1,2-Dichloroethane-d4 (S)	%	100	70-130	02/21/12 12:03	
4-Bromofluorobenzene (S)	%	100	70-130	02/21/12 12:03	
Toluene-d8 (S)	%	99	70-130	02/21/12 12:03	

Date: 02/23/2012 05:13 PM

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Essex/Hope Jamestown

Pace Project No.: 3063297

LABORATORY CONTROL SAMPLE: 407096

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	24.4	122	64.3-127	
1,1,2,2-Tetrachloroethane	ug/L	20	20.0	100	64.6-121	
1,1,2-Trichloroethane	ug/L	20	22.2	111	75.6-120	
1,1-Dichloroethane	ug/L	20	21.3	107	68.5-122	
1,1-Dichloroethene	ug/L	20	22.5	112	57.1-120	
1,2-Dichlorobenzene	ug/L	20	20.7	103	69.6-120	
1,2-Dichloroethane	ug/L	20	21.4	107	60.5-133	
1,2-Dichloropropane	ug/L	20	19.6	98	71-120	
1,3-Dichlorobenzene	ug/L	20	21.7	108	68.4-121	
1,4-Dichlorobenzene	ug/L	20	21.4	107	68.5-123	
2-Butanone (MEK)	ug/L	20	24.0	120	55.7-138	
2-Hexanone	ug/L	20	17.4	87	67-133	
4-Methyl-2-pentanone (MIBK)	ug/L	20	23.3	117	64.5-121	
Acetone	ug/L	20	28.6	143	57.6-168	
Benzene	ug/L	20	21.2	106	69.8-120	
Bromodichloromethane	ug/L	20	19.6	98	66.5-120	
Bromoform	ug/L	20	19.1	95	61.1-120	
Bromomethane	ug/L	20	26.0	130	10.6-200	
Carbon disulfide	ug/L	20	35.7	179	60.2-122	L3
Carbon tetrachloride	ug/L	20	23.2	116	60.1-127	
Chlorobenzene	ug/L	20	22.2	111	72-120	
Chloroethane	ug/L	20	16.9	85	36.8-142	
Chloroform	ug/L	20	21.5	107	69-122	
Chloromethane	ug/L	20	21.6	108	37.2-129	
cis-1,2-Dichloroethene	ug/L	20	22.1	111	69.5-123	
cis-1,3-Dichloropropene	ug/L	20	23.5	118	74.3-120	
Dibromochloromethane	ug/L	20	22.0	110	66.1-120	
Ethylbenzene	ug/L	20	22.2	111	70.9-124	
Isopropylbenzene (Cumene)	ug/L	20	20.7	104	68.3-129	
m&p-Xylene	ug/L	40	45.4	113	70.4-130	
Methylene Chloride	ug/L	20	22.0	110	61.5-125	
o-Xylene	ug/L	20	22.0	110	70.6-127	
Styrene	ug/L	20	20.4	102	69.9-120	
Tetrachloroethene	ug/L	20	24.5	122	63.4-121	L1
Toluene	ug/L	20	24.3	122	71.5-120	L1
trans-1,2-Dichloroethene	ug/L	20	22.2	111	64.1-120	
trans-1,3-Dichloropropene	ug/L	20	22.7	113	71-120	
Trichloroethene	ug/L	20	20.4	102	65.9-120	
Trichlorofluoromethane	ug/L	20	22.7	113	44.8-137	
Vinyl chloride	ug/L	20	23.5	118	51-127	
1,2-Dichloroethane-d4 (S)	%			108	70-130	
4-Bromofluorobenzene (S)	%			88	70-130	
Toluene-d8 (S)	%			110	70-130	

### QUALITY CONTROL DATA

Project: Essex/Hope Jamestown

Pace Project No.: 3063297

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 407683 407684												
Parameter	Units	3062883001		MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits		
1,1,1-Trichloroethane	ug/L	ND	20	20	26.8	24.5	134	123	64.3-127	9	M0	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	22.6	21.7	113	108	64.6-121	4		
1,1,2-Trichloroethane	ug/L	ND	20	20	22.6	21.3	113	106	75.6-120	6		
1,1-Dichloroethane	ug/L	ND	20	20	23.7	22.0	118	110	68.5-122	7		
1,1-Dichloroethene	ug/L	ND	20	20	24.8	23.3	124	116	57.1-120	6	M0	
1,2-Dichlorobenzene	ug/L	ND	20	20	22.5	20.2	112	101	69.6-120	11		
1,2-Dichloroethane	ug/L	ND	20	20	23.8	23.2	119	116	60.5-133	3		
1,2-Dichloropropane	ug/L	ND	20	20	22.9	22.0	114	110	71-120	4		
1,3-Dichlorobenzene	ug/L	ND	20	20	22.3	20.6	111	103	68.4-121	8		
1,4-Dichlorobenzene	ug/L	ND	20	20	22.5	20.9	112	104	68.5-123	7		
2-Butanone (MEK)	ug/L	ND	20	20	26.5	28.7	133	144	55.7-138	8	M0	
2-Hexanone	ug/L	ND	20	20	22.4	21.0	112	105	67-133	7		
4-Methyl-2-pentanone (MIBK)	ug/L	ND	20	20	25.0	23.5	125	117	64.5-121	6	M0	
Acetone	ug/L	ND	20	20	30.4	28.8	152	144	57.6-168	5		
Benzene	ug/L	ND	20	20	23.5	22.5	117	112	69.8-120	4		
Bromodichloromethane	ug/L	ND	20	20	21.6	21.0	108	105	66.5-120	3		
Bromoform	ug/L	ND	20	20	18.4	17.1	92	86	61.1-120	7		
Bromomethane	ug/L	ND	20	20	19.2	21.4	96	107	10.6-200	11		
Carbon disulfide	ug/L	ND	20	20	30.1	28.6	150	143	60.2-122	5	M0	
Carbon tetrachloride	ug/L	ND	20	20	24.3	22.4	122	112	60.1-127	8		
Chlorobenzene	ug/L	ND	20	20	22.8	22.0	114	110	72-120	4		
Chloroethane	ug/L	ND	20	20	23.5	23.8	118	119	36.8-142	1		
Chloroform	ug/L	ND	20	20	23.8	22.6	119	113	69-122	5		
Chloromethane	ug/L	ND	20	20	23.1	24.6	115	123	37.2-129	6		
cis-1,2-Dichloroethene	ug/L	ND	20	20	24.7	23.2	124	116	69.5-123	6	M0	
cis-1,3-Dichloropropene	ug/L	ND	20	20	22.3	22.1	112	111	74.3-120	.8		
Dibromochloromethane	ug/L	ND	20	20	20.2	18.8	101	94	66.1-120	7		
Ethylbenzene	ug/L	ND	20	20	24.0	22.3	120	111	70.9-124	8		
Isopropylbenzene (Cumene)	ug/L				23.8	22.1				7		
m&p-Xylene	ug/L	ND	40	40	47.8	45.1	120	113	70.4-130	6		
Methylene Chloride	ug/L	ND	20	20	22.3	22.0	112	110	61.5-125	1		
o-Xylene	ug/L	ND	20	20	23.4	21.8	117	109	70.6-127	7		
Styrene	ug/L	ND	20	20	21.1	19.7	106	99	69.9-120	7		
Tetrachloroethane	ug/L	ND	20	20	24.0	22.3	120	112	63.4-121	7		
Toluene	ug/L	ND	20	20	23.6	22.0	118	110	71.5-120	7		
trans-1,2-Dichloroethene	ug/L	ND	20	20	23.6	23.0	118	115	64.1-120	2		
trans-1,3-Dichloropropene	ug/L	ND	20	20	23.4	21.8	117	109	71-120	7		
Trichloroethene	ug/L	ND	20	20	21.6	20.8	107	103	65.9-120	4		
Trichlorofluoromethane	ug/L				25.8	25.0				3		
Vinyl chloride	ug/L	ND	20	20	28.3	29.3	141	147	51-127	4	M0	
1,2-Dichloroethane-d4 (S)	%						112	117	70-130			
4-Bromofluorobenzene (S)	%						96	95	70-130			
Toluene-d8 (S)	%						99	102	70-130			



## QUALIFIERS

Project: Essex/Hope Jamestown

Pace Project No.: 3063297

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

### ANALYTE QUALIFIERS

- L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
- L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
- M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.



### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Essex/Hope Jamestown

Pace Project No.: 3063297

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3063297001	PRE-CARB	EPA 8260	MSV/11992		
3063297002	PRIMARY-EFF	EPA 8260	MSV/11992		
3063297003	POST-CARB	EPA 8260	MSV/11992		
3063297004	TB-01	EPA 8260	MSV/11992		



# 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  
 1514040

**Section A**  
 Required Client Information:  
 Company: URS CORP  
 Address: FOSTER PLAZA 4  
501 HOLIDAY DR. STE. 300  
PITTSBURGH, PA 15220  
 Email To: \_\_\_\_\_  
 Project No: 412-5034700 (Fax) 412-503-4701  
 Requested Due Date/TAT: STANDARD

**Section B**  
 Required Project Information:  
 Report To: MARY DOWIAL  
 Copy To: VALERIE SIBETO  
 Purchase Order No.: 41569181  
 Project Name: ESSEX/HOVE BAYESTOWN  
 Project Number: 41569181.10000

**Section C**  
 Invoice Information:  
 Attention: \_\_\_\_\_  
 Company Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Pace Quote Reference: \_\_\_\_\_  
 Pace Project Manager: \_\_\_\_\_  
 Pace Profile #: \_\_\_\_\_

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

ITEM #	SAMPLE ID (A-Z, 0-9 / -)	Matrix Codes MATRIX / CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	# OF CONTAINERS	PRESERVATIVES						Analysis Test ↑	Residual Chlorine (Y/N)
			COMPOSITE START	COMPOSITE END/GRAB				DATE	TIME	DATE	TIME	DATE	TIME		
1	PRE-CARB	Drinking Water			WTG		2								
2	PRIMARY-EFF	Water					2	2/15/12	1150						
3	POST-CARB	Waste Water							1155						
4	POST-CARB	Product							1200						
5	POST-CARB	Soil/Solid							1230						
6	POST-CARB	Oil							1300						
7	TB-01	Wipe							1330						
8		Air													
9		Tissue													
10		Other													
11															
12															

**Requested Analysis Filtered (Y/N)**

**ADDITIONAL COMMENTS**  
 COMPOSITE FOUR (4)  
 POST-CARB SAMPLES IN LAB  
 AND REPORT AS  
 POST-CARB COMPOSITE

**RELINQUISHED BY / AFFILIATION**  
 Valerie Fuks 2/15/12 - B45

**ACCEPTED BY / AFFILIATION**  
 Ted Ex an 2/15/12 - B45  
 Jemen Ailey / Pace 2/16/12 0930

**DATE**  
 2/15/12

**TIME**  
 1150

**DATE**  
 2/15/12

**TIME**  
 1155

**DATE**  
 2/15/12

**TIME**  
 1200

**DATE**  
 2/15/12

**TIME**  
 1230

**DATE**  
 2/15/12

**TIME**  
 1300

**DATE**  
 2/15/12

**TIME**  
 1330

**DATE**  
 2/15/12

**TIME**  
 —

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

**Temp in °C**  
 \_\_\_\_\_

**DATE SIGNED (MM/DD/YY)**  
 2.15.12

**DATE SIGNED (MM/DD/YY)**  
 2.15.12

**SAMPLER NAME AND SIGNATURE**  
 PRINT Name of SAMPLER: VALERIE SIBETO  
 SIGNATURE of SAMPLER: Valerie Sibeto  
 DATE SIGNED (MM/DD/YY): 2.15.12

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Sample Condition Upon Receipt



Client Name: URS

Project # 3063297

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

Tracking #: 872640756827

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 3 5 6    Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 3.4

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: JMS 2/10/12

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>WT</u>	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: <u>VOA</u> , coliform, TOC, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>JMS</u> Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15. <u>TB-01(2)</u>
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

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

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

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

Project Manager Review: [Signature] Date: 2/10/12

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)

April 04, 2012

Mr. Mark Dowiak  
URS Corporation  
Foster Plaza 4  
501 Holiday Drive, Suite 300  
Pittsburgh, PA 15220

RE: Project: ESSEX/HOPE JAMESTOWN  
Pace Project No.: 3065542

Dear Mr. Dowiak:

Enclosed are the analytical results for sample(s) received by the laboratory on March 21, 2012. 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.

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

Sincerely,



Timothy Reed for  
Rachel Christner  
rachel.christner@pacelabs.com  
Project Manager

Enclosures

cc: Ms. Valerie Sibeto, URS Corporation



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: ESSEX/HOPE JAMESTOWN

Pace Project No.: 3065542

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4 Greensburg, PA 15601

AClass DOD-ELAP Accreditation #: ADE-1544

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/TNI Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/TNI Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/TNI Certification #: LA080002

Louisiana/TNI Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188

Utah/TNI Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Virginia VELAP (Cert # 460198)

Washington Certification #: C868

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

## REPORT OF LABORATORY ANALYSIS

## ANALYTICAL RESULTS

Project: ESSEX/HOPE JAMESTOWN

Pace Project No.: 3065542

Sample: PRE-CARB		Lab ID: 3065542001	Collected: 03/20/12 10:40	Received: 03/21/12 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		03/31/12 21:05	67-64-1	
Benzene	7.3	ug/L	1.0	1		03/31/12 21:05	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		03/31/12 21:05	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/31/12 21:05	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/31/12 21:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/31/12 21:05	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		03/31/12 21:05	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/31/12 21:05	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/31/12 21:05	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/31/12 21:05	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/31/12 21:05	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/31/12 21:05	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		03/31/12 21:05	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/31/12 21:05	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/31/12 21:05	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/31/12 21:05	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/31/12 21:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/31/12 21:05	107-06-2	
1,1-Dichloroethene	17.6	ug/L	5.0	1		03/31/12 21:05	75-35-4	
cis-1,2-Dichloroethene	5210	ug/L	500	100		04/02/12 17:01	156-59-2	
trans-1,2-Dichloroethene	67.8	ug/L	5.0	1		03/31/12 21:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/31/12 21:05	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/31/12 21:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/31/12 21:05	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/31/12 21:05	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		03/31/12 21:05	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		03/31/12 21:05	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		03/31/12 21:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/31/12 21:05	108-10-1	
Styrene	ND	ug/L	5.0	1		03/31/12 21:05	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/31/12 21:05	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/31/12 21:05	127-18-4	
Toluene	ND	ug/L	5.0	1		03/31/12 21:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/31/12 21:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/31/12 21:05	79-00-5	
Trichloroethene	611	ug/L	500	100		04/02/12 17:01	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/31/12 21:05	75-69-4	
Vinyl chloride	427	ug/L	100	100		04/02/12 17:01	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		03/31/12 21:05	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		03/31/12 21:05	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102	%	70-130	1		03/31/12 21:05	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130	1		03/31/12 21:05	17060-07-0	
Toluene-d8 (S)	104	%	70-130	1		03/31/12 21:05	2037-26-5	

## ANALYTICAL RESULTS

Project: ESSEX/HOPE JAMESTOWN

Pace Project No.: 3065542

Sample: PRIMARY-EFF		Lab ID: 3065542002	Collected: 03/20/12 10:45	Received: 03/21/12 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		03/31/12 21:31	67-64-1	
Benzene	ND	ug/L	1.0	1		03/31/12 21:31	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		03/31/12 21:31	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/31/12 21:31	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/31/12 21:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/31/12 21:31	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		03/31/12 21:31	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/31/12 21:31	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/31/12 21:31	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/31/12 21:31	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/31/12 21:31	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/31/12 21:31	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		03/31/12 21:31	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/31/12 21:31	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/31/12 21:31	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/31/12 21:31	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/31/12 21:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/31/12 21:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/31/12 21:31	75-35-4	
cis-1,2-Dichloroethene	<b>1730</b>	ug/L	250	50		04/02/12 17:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/31/12 21:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/31/12 21:31	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/31/12 21:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/31/12 21:31	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/31/12 21:31	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		03/31/12 21:31	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		03/31/12 21:31	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		03/31/12 21:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/31/12 21:31	108-10-1	
Styrene	ND	ug/L	5.0	1		03/31/12 21:31	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/31/12 21:31	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/31/12 21:31	127-18-4	
Toluene	ND	ug/L	5.0	1		03/31/12 21:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/31/12 21:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/31/12 21:31	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		03/31/12 21:31	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/31/12 21:31	75-69-4	
Vinyl chloride	<b>767</b>	ug/L	50.0	50		04/02/12 17:28	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		03/31/12 21:31	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		03/31/12 21:31	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101	%	70-130	1		03/31/12 21:31	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130	1		03/31/12 21:31	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		03/31/12 21:31	2037-26-5	

## ANALYTICAL RESULTS

Project: ESSEX/HOPE JAMESTOWN

Pace Project No.: 3065542

**Sample: POST-CARB**      **Lab ID: 3065542003**      Collected: 03/20/12 12:20      Received: 03/21/12 10:00      Matrix: Water

Comments: • Sample Collection times 3/20/12 10:50, 11:20, 11:50, and 12:20  
• This sample composited from four vials prior to analysis for 8260B VOA.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		03/31/12 21:57	67-64-1	
Benzene	ND	ug/L	1.0	1		03/31/12 21:57	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		03/31/12 21:57	75-27-4	
Bromoform	ND	ug/L	5.0	1		03/31/12 21:57	75-25-2	
Bromomethane	ND	ug/L	5.0	1		03/31/12 21:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/31/12 21:57	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		03/31/12 21:57	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		03/31/12 21:57	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		03/31/12 21:57	108-90-7	
Chloroethane	ND	ug/L	5.0	1		03/31/12 21:57	75-00-3	
Chloroform	ND	ug/L	5.0	1		03/31/12 21:57	67-66-3	
Chloromethane	ND	ug/L	5.0	1		03/31/12 21:57	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		03/31/12 21:57	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		03/31/12 21:57	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		03/31/12 21:57	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		03/31/12 21:57	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		03/31/12 21:57	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		03/31/12 21:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		03/31/12 21:57	75-35-4	
cis-1,2-Dichloroethene	<b>206</b>	ug/L	5.0	1		03/31/12 21:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		03/31/12 21:57	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		03/31/12 21:57	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		03/31/12 21:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		03/31/12 21:57	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		03/31/12 21:57	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		03/31/12 21:57	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		03/31/12 21:57	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		03/31/12 21:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/31/12 21:57	108-10-1	
Styrene	ND	ug/L	5.0	1		03/31/12 21:57	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		03/31/12 21:57	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		03/31/12 21:57	127-18-4	
Toluene	ND	ug/L	5.0	1		03/31/12 21:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		03/31/12 21:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		03/31/12 21:57	79-00-5	
Trichloroethene	<b>6.2</b>	ug/L	5.0	1		03/31/12 21:57	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		03/31/12 21:57	75-69-4	
Vinyl chloride	<b>655</b>	ug/L	10.0	10		04/02/12 17:54	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		03/31/12 21:57	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		03/31/12 21:57	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		03/31/12 21:57	460-00-4	
1,2-Dichloroethane-d4 (S)	104 %		70-130	1		03/31/12 21:57	17060-07-0	
Toluene-d8 (S)	101 %		70-130	1		03/31/12 21:57	2037-26-5	



## ANALYTICAL RESULTS

Project: ESSEX/HOPE JAMESTOWN

Pace Project No.: 3065542

Sample: TB-01		Lab ID: 3065542007	Collected: 03/20/12 00:01	Received: 03/21/12 10:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND ug/L		10.0	1		03/31/12 18:01	67-64-1	
Benzene	ND ug/L		1.0	1		03/31/12 18:01	71-43-2	
Bromodichloromethane	ND ug/L		5.0	1		03/31/12 18:01	75-27-4	
Bromoform	ND ug/L		5.0	1		03/31/12 18:01	75-25-2	
Bromomethane	ND ug/L		5.0	1		03/31/12 18:01	74-83-9	
2-Butanone (MEK)	ND ug/L		10.0	1		03/31/12 18:01	78-93-3	
Carbon disulfide	ND ug/L		5.0	1		03/31/12 18:01	75-15-0	
Carbon tetrachloride	ND ug/L		5.0	1		03/31/12 18:01	56-23-5	
Chlorobenzene	ND ug/L		5.0	1		03/31/12 18:01	108-90-7	
Chloroethane	ND ug/L		5.0	1		03/31/12 18:01	75-00-3	
Chloroform	ND ug/L		5.0	1		03/31/12 18:01	67-66-3	
Chloromethane	ND ug/L		5.0	1		03/31/12 18:01	74-87-3	
Dibromochloromethane	ND ug/L		5.0	1		03/31/12 18:01	124-48-1	
1,2-Dichlorobenzene	ND ug/L		5.0	1		03/31/12 18:01	95-50-1	
1,3-Dichlorobenzene	ND ug/L		5.0	1		03/31/12 18:01	541-73-1	
1,4-Dichlorobenzene	ND ug/L		5.0	1		03/31/12 18:01	106-46-7	
1,1-Dichloroethane	ND ug/L		5.0	1		03/31/12 18:01	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	1		03/31/12 18:01	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	1		03/31/12 18:01	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	1		03/31/12 18:01	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	1		03/31/12 18:01	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	1		03/31/12 18:01	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		5.0	1		03/31/12 18:01	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		5.0	1		03/31/12 18:01	10061-02-6	
Ethylbenzene	ND ug/L		5.0	1		03/31/12 18:01	100-41-4	
2-Hexanone	ND ug/L		10.0	1		03/31/12 18:01	591-78-6	
Isopropylbenzene (Cumene)	ND ug/L		1.0	1		03/31/12 18:01	98-82-8	
Methylene Chloride	ND ug/L		5.0	1		03/31/12 18:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	1		03/31/12 18:01	108-10-1	
Styrene	ND ug/L		5.0	1		03/31/12 18:01	100-42-5	
1,1,2,2-Tetrachloroethane	ND ug/L		5.0	1		03/31/12 18:01	79-34-5	
Tetrachloroethene	ND ug/L		5.0	1		03/31/12 18:01	127-18-4	
Toluene	ND ug/L		5.0	1		03/31/12 18:01	108-88-3	
1,1,1-Trichloroethane	ND ug/L		5.0	1		03/31/12 18:01	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	1		03/31/12 18:01	79-00-5	
Trichloroethene	ND ug/L		5.0	1		03/31/12 18:01	79-01-6	
Trichlorofluoromethane	ND ug/L		5.0	1		03/31/12 18:01	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		03/31/12 18:01	75-01-4	
m&p-Xylene	ND ug/L		5.0	1		03/31/12 18:01	179601-23-1	
o-Xylene	ND ug/L		5.0	1		03/31/12 18:01	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	105 %		70-130	1		03/31/12 18:01	460-00-4	
1,2-Dichloroethane-d4 (S)	104 %		70-130	1		03/31/12 18:01	17060-07-0	
Toluene-d8 (S)	101 %		70-130	1		03/31/12 18:01	2037-26-5	

### QUALITY CONTROL DATA

Project: ESSEX/HOPE JAMESTOWN

Pace Project No.: 3065542

QC Batch: MSV/12348 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 3065542001, 3065542002, 3065542003, 3065542007

METHOD BLANK: 424271 Matrix: Water

Associated Lab Samples: 3065542001, 3065542002, 3065542003, 3065542007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	03/31/12 17:35	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	03/31/12 17:35	
1,1,2-Trichloroethane	ug/L	ND	5.0	03/31/12 17:35	
1,1-Dichloroethane	ug/L	ND	5.0	03/31/12 17:35	
1,1-Dichloroethene	ug/L	ND	5.0	03/31/12 17:35	
1,2-Dichlorobenzene	ug/L	ND	5.0	03/31/12 17:35	
1,2-Dichloroethane	ug/L	ND	5.0	03/31/12 17:35	
1,2-Dichloropropane	ug/L	ND	5.0	03/31/12 17:35	
1,3-Dichlorobenzene	ug/L	ND	5.0	03/31/12 17:35	
1,4-Dichlorobenzene	ug/L	ND	5.0	03/31/12 17:35	
2-Butanone (MEK)	ug/L	ND	10.0	03/31/12 17:35	
2-Hexanone	ug/L	ND	10.0	03/31/12 17:35	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	03/31/12 17:35	
Acetone	ug/L	ND	10.0	03/31/12 17:35	
Benzene	ug/L	ND	1.0	03/31/12 17:35	
Bromodichloromethane	ug/L	ND	5.0	03/31/12 17:35	
Bromoform	ug/L	ND	5.0	03/31/12 17:35	
Bromomethane	ug/L	ND	5.0	03/31/12 17:35	
Carbon disulfide	ug/L	ND	5.0	03/31/12 17:35	
Carbon tetrachloride	ug/L	ND	5.0	03/31/12 17:35	
Chlorobenzene	ug/L	ND	5.0	03/31/12 17:35	
Chloroethane	ug/L	ND	5.0	03/31/12 17:35	
Chloroform	ug/L	ND	5.0	03/31/12 17:35	
Chloromethane	ug/L	ND	5.0	03/31/12 17:35	
cis-1,2-Dichloroethene	ug/L	ND	5.0	03/31/12 17:35	
cis-1,3-Dichloropropene	ug/L	ND	5.0	03/31/12 17:35	
Dibromochloromethane	ug/L	ND	5.0	03/31/12 17:35	
Ethylbenzene	ug/L	ND	5.0	03/31/12 17:35	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	03/31/12 17:35	
m&p-Xylene	ug/L	ND	5.0	03/31/12 17:35	
Methylene Chloride	ug/L	ND	5.0	03/31/12 17:35	
o-Xylene	ug/L	ND	5.0	03/31/12 17:35	
Styrene	ug/L	ND	5.0	03/31/12 17:35	
Tetrachloroethene	ug/L	ND	5.0	03/31/12 17:35	
Toluene	ug/L	ND	5.0	03/31/12 17:35	
trans-1,2-Dichloroethene	ug/L	ND	5.0	03/31/12 17:35	
trans-1,3-Dichloropropene	ug/L	ND	5.0	03/31/12 17:35	
Trichloroethene	ug/L	ND	5.0	03/31/12 17:35	
Trichlorofluoromethane	ug/L	ND	5.0	03/31/12 17:35	
Vinyl chloride	ug/L	ND	1.0	03/31/12 17:35	
1,2-Dichloroethane-d4 (S)	%	102	70-130	03/31/12 17:35	
4-Bromofluorobenzene (S)	%	104	70-130	03/31/12 17:35	
Toluene-d8 (S)	%	102	70-130	03/31/12 17:35	

Date: 04/04/2012 02:04 PM

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: ESSEX/HOPE JAMESTOWN

Pace Project No.: 3065542

LABORATORY CONTROL SAMPLE: 424272

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.7	104	64.3-127	
1,1,2,2-Tetrachloroethane	ug/L	20	20.3	101	64.6-121	
1,1,2-Trichloroethane	ug/L	20	21.2	106	75.6-120	
1,1-Dichloroethane	ug/L	20	20.1	100	68.5-122	
1,1-Dichloroethene	ug/L	20	19.3	97	57.1-120	
1,2-Dichlorobenzene	ug/L	20	19.8	99	69.6-120	
1,2-Dichloroethane	ug/L	20	19.7	99	60.5-133	
1,2-Dichloropropane	ug/L	20	22.3	112	71-120	
1,3-Dichlorobenzene	ug/L	20	19.8	99	68.4-121	
1,4-Dichlorobenzene	ug/L	20	20.0	100	68.5-123	
2-Butanone (MEK)	ug/L	20	20.5	102	55.7-138	
2-Hexanone	ug/L	20	19.0	95	67-133	
4-Methyl-2-pentanone (MIBK)	ug/L	20	19.4	97	64.5-121	
Acetone	ug/L	20	15.5	78	57.6-168	
Benzene	ug/L	20	21.7	109	69.8-120	
Bromodichloromethane	ug/L	20	19.9	100	66.5-120	
Bromoform	ug/L	20	19.8	99	61.1-120	
Bromomethane	ug/L	20	19.9	99	10.6-200	
Carbon disulfide	ug/L	20	14.1	70	60.2-122	
Carbon tetrachloride	ug/L	20	20.2	101	60.1-127	
Chlorobenzene	ug/L	20	20.5	102	72-120	
Chloroethane	ug/L	20	14.1	71	36.8-142	
Chloroform	ug/L	20	19.8	99	69-122	
Chloromethane	ug/L	20	17.0	85	37.2-129	
cis-1,2-Dichloroethene	ug/L	20	20.4	102	69.5-123	
cis-1,3-Dichloropropene	ug/L	20	20.9	105	74.3-120	
Dibromochloromethane	ug/L	20	19.9	100	66.1-120	
Ethylbenzene	ug/L	20	20.5	103	70.9-124	
Isopropylbenzene (Cumene)	ug/L	20	23.4	117	68.3-129	
m&p-Xylene	ug/L	40	41.9	105	70.4-130	
Methylene Chloride	ug/L	20	20.8	104	61.5-125	
o-Xylene	ug/L	20	21.0	105	70.6-127	
Styrene	ug/L	20	20.5	103	69.9-120	
Tetrachloroethene	ug/L	20	20.3	101	63.4-121	
Toluene	ug/L	20	21.5	107	71.5-120	
trans-1,2-Dichloroethene	ug/L	20	19.9	100	64.1-120	
trans-1,3-Dichloropropene	ug/L	20	19.1	95	71-120	
Trichloroethene	ug/L	20	20.1	101	65.9-120	
Trichlorofluoromethane	ug/L	20	15.9	79	44.8-137	
Vinyl chloride	ug/L	20	16.3	81	51-127	
1,2-Dichloroethane-d4 (S)	%			100	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			104	70-130	

## QUALIFIERS

Project: ESSEX/HOPE JAMESTOWN

Pace Project No.: 3065542

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### BATCH QUALIFIERS

Batch: MSV/12348

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

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ESSEX/HOPE JAMESTOWN

Pace Project No.: 3065542

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3065542001	PRE-CARB	EPA 8260	MSV/12348		
3065542002	PRIMARY-EFF	EPA 8260	MSV/12348		
3065542003	POST-CARB	EPA 8260	MSV/12348		
3065542007	TB-01	EPA 8260	MSV/12348		

# CHAIN-OF-CUSTODY / Analytical Request Document

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



<b>Section A</b> Required Client Information: Company: <b>URS CORP</b> Address: <b>POSTER PLAZA 4</b> <b>501 HOLIDAY DR STE 300</b> <b>PITTSBURGH, PA 15220</b> Email To:		<b>Section B</b> Required Project Information: Report To: <b>MARK DOWIAK</b> Copy To: <b>VALERIE SIBETO</b> Purchase Order No.: <b>41569181</b> Project Name: <b>ESSEX/HOPE TOWN</b> Project Number: <b>41569181.1000</b>		<b>Section C</b> Invoice Information: Attention: <b>1492350</b> Company Name: Address: Pace Quote Reference: Pace Project Manager: Pace Profile #: Regulatory Agency: <b>NY</b> <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER Site Location: <b>NY</b> STATE:	
---	--	---	--	--	--

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	# OF CONTAINERS	Preservatives						Analysis Test Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
			COMPOSITE START	COMPOSITE END/GRAB				DATE	TIME	DATE	TIME	DATE	TIME				
1	SAMPLE ID (A-Z, 0-9 / .)	Drinking Water			WTG											001	
2		Water														002	
3		Waste Water														003	
4		Product														004	
5		Soil/Solid														005	
6		Oil														006	
7		Sludge														007	
8		Air															
9		Other															
10																	
11																	
12																	

ADDITIONAL COMMENTS: <b>COMPOSITE FOUR (4)</b> <b>POST-CARB SAMPLES</b> <b>IN LAB AND REPORT</b> <b>AS POST-CARB COMPOSITE</b>	RELINQUISHED BY / AFFILIATION: <b>Valerie Sibeto</b>	DATE: <b>3/20/12</b>	TIME: <b>1500</b>	ACCEPTED BY / AFFILIATION: <b>Valerie Sibeto</b>	DATE: <b>3/20/12</b>	TIME: <b>10:00</b>	SAMPLE CONDITIONS: Received on Ice (Y/N): <b>Y</b> Sealed Coolery (Y/N): <b>N</b> Samples Intact (Y/N): <b>Y</b>
--	---	-------------------------	----------------------	---	-------------------------	-----------------------	---

SAMPLER NAME AND SIGNATURE:  
 PRINT Name of SAMPLER: **VALERIE SIBETO**  
 SIGNATURE OF SAMPLER: *[Signature]*  
 DATE Signed (MM/DD/YY): **3.20.12**



Sample Condition Upon Receipt

AD

Client Name: URS CORP

Project # 3065542

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

Tracking #: 8126 4075 6860

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 Bags

Thermometer Used 3 5 6 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 1.4  
Temp should be above freezing to 6°C

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: AD 3/21/12

Comments:

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

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

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

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

Project Manager Review: [Signature]

Date: 3/27/12

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)

April 30, 2012

Mr. Mark Dowiak  
URS Corporation  
Foster Plaza 4  
501 Holiday Drive, Suite 300  
Pittsburgh, PA 15220


RE: Project: 41569181.10000/Essex-Hope  
Pace Project No.: 3067863

Dear Mr. Dowiak:

Enclosed are the analytical results for sample(s) received by the laboratory on April 20, 2012. 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.

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

Sincerely,



Timothy Reed

timothy.reed@pacelabs.com  
Project Manager

Enclosures

cc: Ms. Valerie Sibeto, URS Corporation



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 41569181.10000/Essex-Hope

Pace Project No.: 3067863

### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4 Greensburg, PA 15601

ACLASS DOD-ELAP Accreditation #: ADE-1544

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/TNI Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/TNI Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/TNI Certification #: LA080002

Louisiana/TNI Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188

Utah/TNI Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Virginia VELAP (Cert # 460198)

Washington Certification #: C868

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

## REPORT OF LABORATORY ANALYSIS

## ANALYTICAL RESULTS

Project: 41569181.10000/Essex-Hope

Pace Project No.: 3067863

Sample: PRE-CARB		Lab ID: 3067863001	Collected: 04/19/12 11:05	Received: 04/20/12 10:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		04/25/12 20:14	67-64-1	
Benzene	6.2	ug/L	1.0	1		04/25/12 20:14	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/25/12 20:14	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/25/12 20:14	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/25/12 20:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/25/12 20:14	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		04/25/12 20:14	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/25/12 20:14	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/25/12 20:14	108-90-7	
Chloroethane	ND	ug/L	5.0	1		04/25/12 20:14	75-00-3	
Chloroform	ND	ug/L	5.0	1		04/25/12 20:14	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/25/12 20:14	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		04/25/12 20:14	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/25/12 20:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/25/12 20:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/25/12 20:14	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/25/12 20:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/25/12 20:14	107-06-2	
1,1-Dichloroethene	14.9	ug/L	5.0	1		04/25/12 20:14	75-35-4	
cis-1,2-Dichloroethene	4840	ug/L	125	25		04/27/12 01:59	156-59-2	
trans-1,2-Dichloroethene	107	ug/L	5.0	1		04/25/12 20:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/25/12 20:14	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/25/12 20:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/25/12 20:14	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/25/12 20:14	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/25/12 20:14	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		04/25/12 20:14	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		04/25/12 20:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/25/12 20:14	108-10-1	
Styrene	ND	ug/L	5.0	1		04/25/12 20:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/25/12 20:14	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/25/12 20:14	127-18-4	
Toluene	ND	ug/L	5.0	1		04/25/12 20:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/25/12 20:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/25/12 20:14	79-00-5	
Trichloroethene	469	ug/L	125	25		04/27/12 01:59	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		04/25/12 20:14	75-69-4	
Vinyl chloride	368	ug/L	25.0	25		04/27/12 01:59	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		04/25/12 20:14	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		04/25/12 20:14	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102	%	70-130	1		04/25/12 20:14	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130	1		04/25/12 20:14	17060-07-0	
Toluene-d8 (S)	95	%	70-130	1		04/25/12 20:14	2037-26-5	

## ANALYTICAL RESULTS

Project: 41569181.10000/Essex-Hope

Pace Project No.: 3067863

Sample: PRIMARY-EFF		Lab ID: 3067863002	Collected: 04/19/12 11:10	Received: 04/20/12 10:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		04/25/12 20:41	67-64-1	
Benzene	ND	ug/L	1.0	1		04/25/12 20:41	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/25/12 20:41	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/25/12 20:41	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/25/12 20:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/25/12 20:41	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		04/25/12 20:41	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/25/12 20:41	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/25/12 20:41	108-90-7	
Chloroethane	ND	ug/L	5.0	1		04/25/12 20:41	75-00-3	
Chloroform	ND	ug/L	5.0	1		04/25/12 20:41	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/25/12 20:41	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		04/25/12 20:41	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/25/12 20:41	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/25/12 20:41	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/25/12 20:41	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/25/12 20:41	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/25/12 20:41	107-06-2	
1,1-Dichloroethene	5.5	ug/L	5.0	1		04/25/12 20:41	75-35-4	
cis-1,2-Dichloroethene	3450	ug/L	125	25		04/27/12 02:23	156-59-2	
trans-1,2-Dichloroethene	27.8	ug/L	5.0	1		04/25/12 20:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/25/12 20:41	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/25/12 20:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/25/12 20:41	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/25/12 20:41	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/25/12 20:41	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		04/25/12 20:41	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		04/25/12 20:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/25/12 20:41	108-10-1	
Styrene	ND	ug/L	5.0	1		04/25/12 20:41	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/25/12 20:41	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/25/12 20:41	127-18-4	
Toluene	ND	ug/L	5.0	1		04/25/12 20:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/25/12 20:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/25/12 20:41	79-00-5	
Trichloroethene	7.7	ug/L	5.0	1		04/25/12 20:41	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		04/25/12 20:41	75-69-4	
Vinyl chloride	488	ug/L	25.0	25		04/27/12 02:23	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		04/25/12 20:41	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		04/25/12 20:41	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102	%	70-130	1		04/25/12 20:41	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130	1		04/25/12 20:41	17060-07-0	
Toluene-d8 (S)	94	%	70-130	1		04/25/12 20:41	2037-26-5	

## ANALYTICAL RESULTS

Project: 41569181.10000/Essex-Hope

Pace Project No.: 3067863

**Sample: POST-CARB**      **Lab ID: 3067863003**      Collected: 04/19/12 12:45      Received: 04/20/12 10:15      Matrix: Water

Comments: • This sample composted from four vial prior to 8260B VOA analysis.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		04/25/12 21:07	67-64-1	
Benzene	ND	ug/L	1.0	1		04/25/12 21:07	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/25/12 21:07	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/25/12 21:07	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/25/12 21:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/25/12 21:07	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		04/25/12 21:07	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/25/12 21:07	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/25/12 21:07	108-90-7	
Chloroethane	ND	ug/L	5.0	1		04/25/12 21:07	75-00-3	
Chloroform	ND	ug/L	5.0	1		04/25/12 21:07	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/25/12 21:07	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		04/25/12 21:07	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/25/12 21:07	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/25/12 21:07	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/25/12 21:07	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/25/12 21:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/25/12 21:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/25/12 21:07	75-35-4	
cis-1,2-Dichloroethene	<b>169</b>	ug/L	5.0	1		04/25/12 21:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/25/12 21:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/25/12 21:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/25/12 21:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/25/12 21:07	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/25/12 21:07	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/25/12 21:07	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		04/25/12 21:07	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		04/25/12 21:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/25/12 21:07	108-10-1	
Styrene	ND	ug/L	5.0	1		04/25/12 21:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/25/12 21:07	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/25/12 21:07	127-18-4	
Toluene	ND	ug/L	5.0	1		04/25/12 21:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/25/12 21:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/25/12 21:07	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/25/12 21:07	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		04/25/12 21:07	75-69-4	
Vinyl chloride	<b>833</b>	ug/L	10.0	10		04/27/12 02:48	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		04/25/12 21:07	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		04/25/12 21:07	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	106 %		70-130	1		04/25/12 21:07	460-00-4	
1,2-Dichloroethane-d4 (S)	105 %		70-130	1		04/25/12 21:07	17060-07-0	
Toluene-d8 (S)	92 %		70-130	1		04/25/12 21:07	2037-26-5	

## ANALYTICAL RESULTS

Project: 41569181.10000/Essex-Hope

Pace Project No.: 3067863

Sample: TB-01		Lab ID: 3067863004	Collected: 04/19/12 00:01	Received: 04/20/12 10:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		04/25/12 13:14	67-64-1	
Benzene	ND	ug/L	1.0	1		04/25/12 13:14	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		04/25/12 13:14	75-27-4	
Bromoform	ND	ug/L	5.0	1		04/25/12 13:14	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/25/12 13:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/25/12 13:14	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		04/25/12 13:14	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		04/25/12 13:14	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		04/25/12 13:14	108-90-7	
Chloroethane	ND	ug/L	5.0	1		04/25/12 13:14	75-00-3	
Chloroform	ND	ug/L	5.0	1		04/25/12 13:14	67-66-3	
Chloromethane	ND	ug/L	5.0	1		04/25/12 13:14	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		04/25/12 13:14	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		04/25/12 13:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		04/25/12 13:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		04/25/12 13:14	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		04/25/12 13:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		04/25/12 13:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		04/25/12 13:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		04/25/12 13:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		04/25/12 13:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		04/25/12 13:14	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		04/25/12 13:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		04/25/12 13:14	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		04/25/12 13:14	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		04/25/12 13:14	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		04/25/12 13:14	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		04/25/12 13:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/25/12 13:14	108-10-1	
Styrene	ND	ug/L	5.0	1		04/25/12 13:14	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		04/25/12 13:14	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		04/25/12 13:14	127-18-4	
Toluene	ND	ug/L	5.0	1		04/25/12 13:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		04/25/12 13:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		04/25/12 13:14	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		04/25/12 13:14	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		04/25/12 13:14	75-69-4	
Vinyl chloride	ND	ug/L	1.0	1		04/25/12 13:14	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		04/25/12 13:14	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		04/25/12 13:14	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-130	1		04/25/12 13:14	460-00-4	
1,2-Dichloroethane-d4 (S)	111 %		70-130	1		04/25/12 13:14	17060-07-0	
Toluene-d8 (S)	93 %		70-130	1		04/25/12 13:14	2037-26-5	

### QUALITY CONTROL DATA

Project: 41569181.10000/Essex-Hope

Pace Project No.: 3067863

QC Batch: MSV/12566 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 3067863001, 3067863002, 3067863003, 3067863004

METHOD BLANK: 433104 Matrix: Water  
Associated Lab Samples: 3067863001, 3067863002, 3067863003, 3067863004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	04/25/12 12:47	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	04/25/12 12:47	
1,1,2-Trichloroethane	ug/L	ND	5.0	04/25/12 12:47	
1,1-Dichloroethane	ug/L	ND	5.0	04/25/12 12:47	
1,1-Dichloroethene	ug/L	ND	5.0	04/25/12 12:47	
1,2-Dichlorobenzene	ug/L	ND	5.0	04/25/12 12:47	
1,2-Dichloroethane	ug/L	ND	5.0	04/25/12 12:47	
1,2-Dichloropropane	ug/L	ND	5.0	04/25/12 12:47	
1,3-Dichlorobenzene	ug/L	ND	5.0	04/25/12 12:47	
1,4-Dichlorobenzene	ug/L	ND	5.0	04/25/12 12:47	
2-Butanone (MEK)	ug/L	ND	10.0	04/25/12 12:47	
2-Hexanone	ug/L	ND	10.0	04/25/12 12:47	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	04/25/12 12:47	
Acetone	ug/L	ND	10.0	04/25/12 12:47	
Benzene	ug/L	ND	1.0	04/25/12 12:47	
Bromodichloromethane	ug/L	ND	5.0	04/25/12 12:47	
Bromoform	ug/L	ND	5.0	04/25/12 12:47	
Bromomethane	ug/L	ND	5.0	04/25/12 12:47	
Carbon disulfide	ug/L	ND	5.0	04/25/12 12:47	
Carbon tetrachloride	ug/L	ND	5.0	04/25/12 12:47	
Chlorobenzene	ug/L	ND	5.0	04/25/12 12:47	
Chloroethane	ug/L	ND	5.0	04/25/12 12:47	
Chloroform	ug/L	ND	5.0	04/25/12 12:47	
Chloromethane	ug/L	ND	5.0	04/25/12 12:47	
cis-1,2-Dichloroethene	ug/L	ND	5.0	04/25/12 12:47	
cis-1,3-Dichloropropene	ug/L	ND	5.0	04/25/12 12:47	
Dibromochloromethane	ug/L	ND	5.0	04/25/12 12:47	
Ethylbenzene	ug/L	ND	5.0	04/25/12 12:47	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	04/25/12 12:47	
m&p-Xylene	ug/L	ND	5.0	04/25/12 12:47	
Methylene Chloride	ug/L	ND	5.0	04/25/12 12:47	B,C9
o-Xylene	ug/L	ND	5.0	04/25/12 12:47	
Styrene	ug/L	ND	5.0	04/25/12 12:47	
Tetrachloroethene	ug/L	ND	5.0	04/25/12 12:47	
Toluene	ug/L	ND	5.0	04/25/12 12:47	
trans-1,2-Dichloroethene	ug/L	ND	5.0	04/25/12 12:47	
trans-1,3-Dichloropropene	ug/L	ND	5.0	04/25/12 12:47	
Trichloroethene	ug/L	ND	5.0	04/25/12 12:47	
Trichlorofluoromethane	ug/L	ND	5.0	04/25/12 12:47	
Vinyl chloride	ug/L	ND	1.0	04/25/12 12:47	
1,2-Dichloroethane-d4 (S)	%	111	70-130	04/25/12 12:47	
4-Bromofluorobenzene (S)	%	101	70-130	04/25/12 12:47	
Toluene-d8 (S)	%	93	70-130	04/25/12 12:47	

Date: 04/30/2012 04:31 PM

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 41569181.10000/Essex-Hope

Pace Project No.: 3067863

LABORATORY CONTROL SAMPLE: 433105

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.7	94	64.3-127	
1,1,2,2-Tetrachloroethane	ug/L	20	16.5	83	64.6-121	
1,1,2-Trichloroethane	ug/L	20	16.4	82	75.6-120	
1,1-Dichloroethane	ug/L	20	17.8	89	68.5-122	
1,1-Dichloroethene	ug/L	20	16.9	84	57.1-120	
1,2-Dichlorobenzene	ug/L	20	16.6	83	69.6-120	
1,2-Dichloroethane	ug/L	20	17.6	88	60.5-133	
1,2-Dichloropropane	ug/L	20	15.7	78	71-120	
1,3-Dichlorobenzene	ug/L	20	16.2	81	68.4-121	
1,4-Dichlorobenzene	ug/L	20	16.7	83	68.5-123	
2-Butanone (MEK)	ug/L	20	23.0	115	55.7-138	
2-Hexanone	ug/L	20	21.4	107	67-133	
4-Methyl-2-pentanone (MIBK)	ug/L	20	19.0	95	64.5-121	
Acetone	ug/L	20	24.7	123	57.6-168	
Benzene	ug/L	20	16.2	81	69.8-120	
Bromodichloromethane	ug/L	20	15.2	76	66.5-120	
Bromoform	ug/L	20	15.8	79	61.1-120	
Bromomethane	ug/L	20	32.6	163	10.6-200	
Carbon disulfide	ug/L	20	20.5	103	60.2-122	
Carbon tetrachloride	ug/L	20	17.6	88	60.1-127	
Chlorobenzene	ug/L	20	16.0	80	72-120	
Chloroethane	ug/L	20	18.6	93	36.8-142	
Chloroform	ug/L	20	17.9	89	69-122	
Chloromethane	ug/L	20	16.9	85	37.2-129	
cis-1,2-Dichloroethene	ug/L	20	17.4	87	69.5-123	
cis-1,3-Dichloropropene	ug/L	20	15.7	78	74.3-120	
Dibromochloromethane	ug/L	20	17.0	85	66.1-120	
Ethylbenzene	ug/L	20	16.3	82	70.9-124	
Isopropylbenzene (Cumene)	ug/L	20	17.7	88	68.3-129	
m&p-Xylene	ug/L	40	33.0	82	70.4-130	
Methylene Chloride	ug/L	20	19.3	96	61.5-125	
o-Xylene	ug/L	20	15.9	79	70.6-127	
Styrene	ug/L	20	15.9	79	69.9-120	
Tetrachloroethene	ug/L	20	16.2	81	63.4-121	
Toluene	ug/L	20	16.0	80	71.5-120	
trans-1,2-Dichloroethene	ug/L	20	17.4	87	64.1-120	
trans-1,3-Dichloropropene	ug/L	20	16.1	80	71-120	
Trichloroethene	ug/L	20	15.8	79	65.9-120	
Trichlorofluoromethane	ug/L	20	19.9	99	44.8-137	
Vinyl chloride	ug/L	20	17.4	87	51-127	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			93	70-130	



### QUALITY CONTROL DATA

Project: 41569181.10000/Essex-Hope

Pace Project No.: 3067863

Parameter	3067783004		MS		MSD		MS		MSD		% Rec	Limits	RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec						
1,1,1-Trichloroethane	ug/L	ND	20	20	20.4	19.8	102	99	64.3-127	3				
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.2	15.8	81	79	64.6-121	2				
1,1,2-Trichloroethane	ug/L	ND	20	20	17.0	16.1	85	80	75.6-120	6				
1,1-Dichloroethane	ug/L	ND	20	20	19.9	18.8	99	94	68.5-122	5				
1,1-Dichloroethene	ug/L	ND	20	20	19.9	19.3	99	96	57.1-120	3				
1,2-Dichlorobenzene	ug/L	ND	20	20	16.3	16.1	81	81	69.6-120	1				
1,2-Dichloroethane	ug/L	ND	20	20	19.0	18.0	95	90	60.5-133	5				
1,2-Dichloropropane	ug/L	ND	20	20	17.8	16.6	89	83	71-120	7				
1,3-Dichlorobenzene	ug/L	ND	20	20	16.8	16.5	84	82	68.4-121	2				
1,4-Dichlorobenzene	ug/L	ND	20	20	16.3	15.8	81	79	68.5-123	3				
2-Butanone (MEK)	ug/L	ND	20	20	19.9	20.6	99	103	55.7-138	3				
2-Hexanone	ug/L	ND	20	20	19.7	20.2	98	101	67-133	3				
4-Methyl-2-pentanone (MIBK)	ug/L	ND	20	20	17.9	18.2	89	91	64.5-121	2				
Acetone	ug/L	ND	20	20	10.9	14.1	55	70	57.6-168	25	M0			
Benzene	ug/L	ND	20	20	18.0	17.1	90	85	69.8-120	5				
Bromodichloromethane	ug/L	ND	20	20	15.7	15.2	79	76	66.5-120	3				
Bromoform	ug/L	ND	20	20	13.6	14.0	68	70	61.1-120	3				
Bromomethane	ug/L	ND	20	20	23.5	24.1	118	121	10.6-200	2				
Carbon disulfide	ug/L	ND	20	20	15.1	15.0	75	75	60.2-122	.8				
Carbon tetrachloride	ug/L	ND	20	20	18.2	17.8	91	89	60.1-127	2				
Chlorobenzene	ug/L	ND	20	20	17.3	16.5	86	83	72-120	4				
Chloroethane	ug/L	ND	20	20	19.2	19.3	96	96	36.8-142	.3				
Chloroform	ug/L	ND	20	20	19.2	18.4	96	92	69-122	4				
Chloromethane	ug/L	ND	20	20	19.9	19.6	99	98	37.2-129	1				
cis-1,2-Dichloroethene	ug/L	ND	20	20	19.7	18.6	99	93	69.5-123	6				
cis-1,3-Dichloropropene	ug/L	ND	20	20	16.0	15.8	80	79	74.3-120	1				
Dibromochloromethane	ug/L	ND	20	20	16.7	16.2	84	81	66.1-120	3				
Ethylbenzene	ug/L	ND	20	20	17.7	17.4	89	87	70.9-124	2				
Isopropylbenzene (Cumene)	ug/L	ND	20	20	19.4	18.5	97	93	68.3-129	4				
m&p-Xylene	ug/L	ND	40	40	35.3	34.3	88	86	70.4-130	3				
Methylene Chloride	ug/L	ND	20	20	19.4	18.7	97	94	61.5-125	4				
o-Xylene	ug/L	ND	20	20	17.5	17.2	87	86	70.6-127	2				
Styrene	ug/L	ND	20	20	16.8	16.2	84	81	69.9-120	4				
Tetrachloroethane	ug/L	ND	20	20	17.6	16.8	88	84	63.4-121	5				
Toluene	ug/L	ND	20	20	18.1	17.2	90	86	71.5-120	5				
trans-1,2-Dichloroethene	ug/L	ND	20	20	19.9	19.0	100	95	64.1-120	5				
trans-1,3-Dichloropropene	ug/L	ND	20	20	15.9	15.5	79	77	71-120	3				
Trichloroethene	ug/L	ND	20	20	17.4	16.6	87	83	65.9-120	5				
Trichlorofluoromethane	ug/L	ND	20	20	22.7	22.6	113	113	44.8-137	.3				
Vinyl chloride	ug/L	ND	20	20	19.5	19.4	97	97	51-127	.3				
1,2-Dichloroethane-d4 (S)	%							94	93	70-130				
4-Bromofluorobenzene (S)	%							99	100	70-130				
Toluene-d8 (S)	%							94	93	70-130				



## QUALIFIERS

Project: 41569181.10000/Essex-Hope  
Pace Project No.: 3067863

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.  
C9 Common Laboratory Contaminant.  
M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 41569181.10000/Essex-Hope

Pace Project No.: 3067863

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3067863001	PRE-CARB	EPA 8260	MSV/12566		
3067863002	PRIMARY-EFF	EPA 8260	MSV/12566		
3067863003	POST-CARB	EPA 8260	MSV/12566		
3067863004	TB-01	EPA 8260	MSV/12566		

# 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  
 1534286

**Section A**  
 Required Client Information:  
 Company: **URS CORP**  
 Address: **FOSTER PLAZA 4**  
**501 HOLIDAY DR, STE. 300**  
**PITTSBURGH, PA 15222**  
 Email To: \_\_\_\_\_  
 Phone: **412-503-4400** Fax: **412-503-4470**  
 Requested Due Date: **TUESDAY STANDARD**

**Section B**  
 Required Project Information:  
 Report To: **MARK DOWIAK**  
 Copy To: **VALERIE SIBER**  
 Purchase Order No.: **41569181**  
 Project Name: **ESSEX/HOPE JAMESTOWN**  
 Project Number: **41569181.1000**

**Section C**  
 Invoice Information:  
 Attention: \_\_\_\_\_  
 Company Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Pace Quote Reference: \_\_\_\_\_  
 Pace Project Manager: \_\_\_\_\_  
 Pace Profile #: \_\_\_\_\_

**REGULATORY AGENCY**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER \_\_\_\_\_

Site Location: **NY**  
 STATE: **NY**

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	SAMPLE ID (A-Z, 0-9 / -)	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	# OF CONTAINERS	Preservatives	Y/N	Requested Analysis Filtered (Y/N)		Temp in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
				COMPOSITE START	COMPOSITE END/GRAB						Residual Chlorine (Y/N)	Analysis Test				
1	Drinking Water	DW	PRE-CARB	DATE: 4/19/12	TIME: 1105	WTG	WTG	Unpreserved								
2	Water	WT	PRIMARY-EFF	DATE: 4/19/12	TIME: 1110			HCl								
3	Waste Water	WW	POST-CARB	DATE: 4/19/12	TIME: 1115			H <sub>2</sub> SO <sub>4</sub>								
4	Product	P	POST-CARB	DATE: 4/19/12	TIME: 1145			HNO <sub>3</sub>								
5	Soil/Solid	SL	POST-CARB	DATE: 4/19/12	TIME: 1215			NaOH								
6	Oil	OL	POST-CARB	DATE: 4/19/12	TIME: 1245			Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>								
7	Wipe	WP	TB01	DATE: 4/19/12	TIME: -			Other								
8	Air	AR														
9	Tissue	TS														
10	Other	OT														
11																
12																
ADDITIONAL COMMENTS: <b>COMPOSITE FOUR (4)</b> <b>POST-CARB SAMPLES IN</b> <b>LAB AND REPORT AS</b> <b>POST-CARB COMPOSITE</b>																
RELINQUISHED BY / AFFILIATION: <b>Valerie Siber / URS</b> DATE: <b>4.19.12</b> TIME: <b>1330</b> ACCEPTED BY / AFFILIATION: <b>[Signature]</b> DATE: <b>4/19/12</b> TIME: <b>1330</b> SAMPLE CONDITIONS: <b>Y N Y N Y</b>																
SAMPLER NAME AND SIGNATURE: <b>VALERIE SIBER</b> PRINT Name of SAMPLER: <b>[Signature]</b> DATE Signed (MM/DD/YY): <b>4-19-12</b> SIGNATURE of SAMPLER: <b>[Signature]</b>																

ORIGINAL

\*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.



Sample Condition Upon Receipt

306 7863

Client Name: URS

Project # 306 7863

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

Tracking #: 872640756882

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 5 (6) 7 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 1.8 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: WCC/20/12

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

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

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

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

Project Manager Review: \_\_\_\_\_

Date: 4-20-12

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)

May 29, 2012

Mr. Mark Dowiak  
URS Corporation  
Foster Plaza 4  
501 Holiday Drive, Suite 300  
Pittsburgh, PA 15220

RE: Project: Essex-Hope Jamestown 41569181  
Pace Project No.: 3069925

Dear Mr. Dowiak:

Enclosed are the analytical results for sample(s) received by the laboratory on May 19, 2012. 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.

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

Sincerely,



Timothy Reed

timothy.reed@pacelabs.com  
Project Manager

Enclosures

cc: Ms. Valerie Sibeto, URS Corporation



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## CERTIFICATIONS

Project: Essex-Hope Jamestown 41569181

Pace Project No.: 3069925

### **Pennsylvania Certification IDs**

1638 Roseytown Rd Suites 2,3&4 Greensburg, PA 15601

ACLASS DOD-ELAP Accreditation #: ADE-1544

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/TNI Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/TNI Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/TNI Certification #: LA080002

Louisiana/TNI Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188

Utah/TNI Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Virginia VELAP (Cert # 460198)

Washington Certification #: C868

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

## ANALYTICAL RESULTS

Project: Essex-Hope Jamestown 41569181

Pace Project No.: 3069925

Sample: PRE-CARB		Lab ID: 3069925001	Collected: 05/18/12 10:40	Received: 05/19/12 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		05/21/12 15:51	67-64-1	
Benzene	7.7	ug/L	1.0	1		05/21/12 15:51	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		05/21/12 15:51	75-27-4	
Bromoform	ND	ug/L	5.0	1		05/21/12 15:51	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/21/12 15:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/21/12 15:51	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		05/21/12 15:51	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		05/21/12 15:51	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		05/21/12 15:51	108-90-7	
Chloroethane	ND	ug/L	5.0	1		05/21/12 15:51	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/21/12 15:51	67-66-3	
Chloromethane	ND	ug/L	5.0	1		05/21/12 15:51	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		05/21/12 15:51	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		05/21/12 15:51	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		05/21/12 15:51	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		05/21/12 15:51	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		05/21/12 15:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		05/21/12 15:51	107-06-2	
1,1-Dichloroethene	17.9	ug/L	5.0	1		05/21/12 15:51	75-35-4	
cis-1,2-Dichloroethene	4650	ug/L	125	25		05/21/12 16:16	156-59-2	
trans-1,2-Dichloroethene	84.1	ug/L	5.0	1		05/21/12 15:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		05/21/12 15:51	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		05/21/12 15:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		05/21/12 15:51	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		05/21/12 15:51	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		05/21/12 15:51	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		05/21/12 15:51	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		05/21/12 15:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/21/12 15:51	108-10-1	
Styrene	ND	ug/L	5.0	1		05/21/12 15:51	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		05/21/12 15:51	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		05/21/12 15:51	127-18-4	
Toluene	ND	ug/L	5.0	1		05/21/12 15:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		05/21/12 15:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		05/21/12 15:51	79-00-5	
Trichloroethene	839	ug/L	125	25		05/21/12 16:16	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		05/21/12 15:51	75-69-4	
Vinyl chloride	394	ug/L	25.0	25		05/21/12 16:16	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		05/21/12 15:51	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		05/21/12 15:51	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	104	%	70-130	1		05/21/12 15:51	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130	1		05/21/12 15:51	17060-07-0	
Toluene-d8 (S)	101	%	70-130	1		05/21/12 15:51	2037-26-5	

## ANALYTICAL RESULTS

Project: Essex-Hope Jamestown 41569181

Pace Project No.: 3069925

Sample: PRIMARY-EFF		Lab ID: 3069925002	Collected: 05/18/12 10:45	Received: 05/19/12 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		05/21/12 16:41	67-64-1	
Benzene	ND	ug/L	1.0	1		05/21/12 16:41	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		05/21/12 16:41	75-27-4	
Bromoform	ND	ug/L	5.0	1		05/21/12 16:41	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/21/12 16:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/21/12 16:41	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		05/21/12 16:41	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		05/21/12 16:41	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		05/21/12 16:41	108-90-7	
Chloroethane	ND	ug/L	5.0	1		05/21/12 16:41	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/21/12 16:41	67-66-3	
Chloromethane	ND	ug/L	5.0	1		05/21/12 16:41	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		05/21/12 16:41	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		05/21/12 16:41	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		05/21/12 16:41	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		05/21/12 16:41	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		05/21/12 16:41	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		05/21/12 16:41	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		05/21/12 16:41	75-35-4	
cis-1,2-Dichloroethene	11.0	ug/L	5.0	1		05/21/12 16:41	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		05/21/12 16:41	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		05/21/12 16:41	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		05/21/12 16:41	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		05/21/12 16:41	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		05/21/12 16:41	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		05/21/12 16:41	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		05/21/12 16:41	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		05/21/12 16:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/21/12 16:41	108-10-1	
Styrene	ND	ug/L	5.0	1		05/21/12 16:41	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		05/21/12 16:41	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		05/21/12 16:41	127-18-4	
Toluene	ND	ug/L	5.0	1		05/21/12 16:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		05/21/12 16:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		05/21/12 16:41	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		05/21/12 16:41	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		05/21/12 16:41	75-69-4	
Vinyl chloride	4.5	ug/L	1.0	1		05/21/12 16:41	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		05/21/12 16:41	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		05/21/12 16:41	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	105 %		70-130	1		05/21/12 16:41	460-00-4	
1,2-Dichloroethane-d4 (S)	104 %		70-130	1		05/21/12 16:41	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		05/21/12 16:41	2037-26-5	



## ANALYTICAL RESULTS

Project: Essex-Hope Jamestown 41569181

Pace Project No.: 3069925

Sample: POST-CARB	Lab ID: 3069925003	Collected: 05/18/12 12:20	Received: 05/19/12 11:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		05/21/12 17:30	67-64-1	
Benzene	ND	ug/L	1.0	1		05/21/12 17:30	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		05/21/12 17:30	75-27-4	
Bromoform	ND	ug/L	5.0	1		05/21/12 17:30	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/21/12 17:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/21/12 17:30	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		05/21/12 17:30	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		05/21/12 17:30	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		05/21/12 17:30	108-90-7	
Chloroethane	ND	ug/L	5.0	1		05/21/12 17:30	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/21/12 17:30	67-66-3	
Chloromethane	ND	ug/L	5.0	1		05/21/12 17:30	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		05/21/12 17:30	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		05/21/12 17:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		05/21/12 17:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		05/21/12 17:30	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		05/21/12 17:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		05/21/12 17:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		05/21/12 17:30	75-35-4	
cis-1,2-Dichloroethene	<b>49.5</b>	ug/L	5.0	1		05/21/12 17:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		05/21/12 17:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		05/21/12 17:30	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		05/21/12 17:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		05/21/12 17:30	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		05/21/12 17:30	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		05/21/12 17:30	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		05/21/12 17:30	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		05/21/12 17:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/21/12 17:30	108-10-1	
Styrene	ND	ug/L	5.0	1		05/21/12 17:30	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		05/21/12 17:30	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		05/21/12 17:30	127-18-4	
Toluene	ND	ug/L	5.0	1		05/21/12 17:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		05/21/12 17:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		05/21/12 17:30	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		05/21/12 17:30	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		05/21/12 17:30	75-69-4	
Vinyl chloride	<b>1.8</b>	ug/L	1.0	1		05/21/12 17:30	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		05/21/12 17:30	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		05/21/12 17:30	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	105	%	70-130	1		05/21/12 17:30	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		05/21/12 17:30	17060-07-0	
Toluene-d8 (S)	94	%	70-130	1		05/21/12 17:30	2037-26-5	

## ANALYTICAL RESULTS

Project: Essex-Hope Jamestown 41569181

Pace Project No.: 3069925

Sample: TB-O1		Lab ID: 3069925004	Collected: 05/18/12 00:01	Received: 05/19/12 11:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		05/21/12 13:24	67-64-1	
Benzene	ND	ug/L	1.0	1		05/21/12 13:24	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		05/21/12 13:24	75-27-4	
Bromoform	ND	ug/L	5.0	1		05/21/12 13:24	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/21/12 13:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/21/12 13:24	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		05/21/12 13:24	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		05/21/12 13:24	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		05/21/12 13:24	108-90-7	
Chloroethane	ND	ug/L	5.0	1		05/21/12 13:24	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/21/12 13:24	67-66-3	
Chloromethane	ND	ug/L	5.0	1		05/21/12 13:24	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		05/21/12 13:24	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		05/21/12 13:24	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		05/21/12 13:24	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		05/21/12 13:24	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		05/21/12 13:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		05/21/12 13:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		05/21/12 13:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		05/21/12 13:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		05/21/12 13:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		05/21/12 13:24	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		05/21/12 13:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		05/21/12 13:24	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		05/21/12 13:24	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		05/21/12 13:24	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		05/21/12 13:24	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		05/21/12 13:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/21/12 13:24	108-10-1	
Styrene	ND	ug/L	5.0	1		05/21/12 13:24	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		05/21/12 13:24	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		05/21/12 13:24	127-18-4	
Toluene	ND	ug/L	5.0	1		05/21/12 13:24	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		05/21/12 13:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		05/21/12 13:24	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		05/21/12 13:24	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		05/21/12 13:24	75-69-4	
Vinyl chloride	ND	ug/L	1.0	1		05/21/12 13:24	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		05/21/12 13:24	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		05/21/12 13:24	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100 %		70-130	1		05/21/12 13:24	460-00-4	
1,2-Dichloroethane-d4 (S)	104 %		70-130	1		05/21/12 13:24	17060-07-0	
Toluene-d8 (S)	96 %		70-130	1		05/21/12 13:24	2037-26-5	

### QUALITY CONTROL DATA

Project: Essex-Hope Jamestown 41569181

Pace Project No.: 3069925

QC Batch: MSV/12793 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 3069925001, 3069925002, 3069925003, 3069925004

METHOD BLANK: 443535 Matrix: Water  
Associated Lab Samples: 3069925001, 3069925002, 3069925003, 3069925004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	05/21/12 12:34	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	05/21/12 12:34	
1,1,2-Trichloroethane	ug/L	ND	5.0	05/21/12 12:34	
1,1-Dichloroethane	ug/L	ND	5.0	05/21/12 12:34	
1,1-Dichloroethene	ug/L	ND	5.0	05/21/12 12:34	
1,2-Dichlorobenzene	ug/L	ND	5.0	05/21/12 12:34	
1,2-Dichloroethane	ug/L	ND	5.0	05/21/12 12:34	
1,2-Dichloropropane	ug/L	ND	5.0	05/21/12 12:34	
1,3-Dichlorobenzene	ug/L	ND	5.0	05/21/12 12:34	
1,4-Dichlorobenzene	ug/L	ND	5.0	05/21/12 12:34	
2-Butanone (MEK)	ug/L	ND	10.0	05/21/12 12:34	
2-Hexanone	ug/L	ND	10.0	05/21/12 12:34	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/21/12 12:34	
Acetone	ug/L	ND	10.0	05/21/12 12:34	
Benzene	ug/L	ND	1.0	05/21/12 12:34	
Bromodichloromethane	ug/L	ND	5.0	05/21/12 12:34	
Bromoform	ug/L	ND	5.0	05/21/12 12:34	
Bromomethane	ug/L	ND	5.0	05/21/12 12:34	
Carbon disulfide	ug/L	ND	5.0	05/21/12 12:34	
Carbon tetrachloride	ug/L	ND	5.0	05/21/12 12:34	
Chlorobenzene	ug/L	ND	5.0	05/21/12 12:34	
Chloroethane	ug/L	ND	5.0	05/21/12 12:34	
Chloroform	ug/L	ND	5.0	05/21/12 12:34	
Chloromethane	ug/L	ND	5.0	05/21/12 12:34	
cis-1,2-Dichloroethene	ug/L	ND	5.0	05/21/12 12:34	
cis-1,3-Dichloropropene	ug/L	ND	5.0	05/21/12 12:34	
Dibromochloromethane	ug/L	ND	5.0	05/21/12 12:34	
Ethylbenzene	ug/L	ND	5.0	05/21/12 12:34	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	05/21/12 12:34	
m&p-Xylene	ug/L	ND	5.0	05/21/12 12:34	
Methylene Chloride	ug/L	ND	5.0	05/21/12 12:34	
o-Xylene	ug/L	ND	5.0	05/21/12 12:34	
Styrene	ug/L	ND	5.0	05/21/12 12:34	
Tetrachloroethene	ug/L	ND	5.0	05/21/12 12:34	
Toluene	ug/L	ND	5.0	05/21/12 12:34	
trans-1,2-Dichloroethene	ug/L	ND	5.0	05/21/12 12:34	
trans-1,3-Dichloropropene	ug/L	ND	5.0	05/21/12 12:34	
Trichloroethene	ug/L	ND	5.0	05/21/12 12:34	
Trichlorofluoromethane	ug/L	ND	5.0	05/21/12 12:34	
Vinyl chloride	ug/L	ND	1.0	05/21/12 12:34	
1,2-Dichloroethane-d4 (S)	%	102	70-130	05/21/12 12:34	
4-Bromofluorobenzene (S)	%	96	70-130	05/21/12 12:34	
Toluene-d8 (S)	%	100	70-130	05/21/12 12:34	

Date: 05/29/2012 03:54 PM

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Essex-Hope Jamestown 41569181  
Pace Project No.: 3069925

LABORATORY CONTROL SAMPLE: 443536

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	23.3	117	64.3-127	
1,1,2,2-Tetrachloroethane	ug/L	20	21.0	105	64.6-121	
1,1,2-Trichloroethane	ug/L	20	21.7	108	75.6-120	
1,1-Dichloroethane	ug/L	20	23.0	115	68.5-122	
1,1-Dichloroethene	ug/L	20	22.4	112	57.1-120	
1,2-Dichlorobenzene	ug/L	20	22.4	112	69.6-120	
1,2-Dichloroethane	ug/L	20	22.8	114	60.5-133	
1,2-Dichloropropane	ug/L	20	20.7	104	71-120	
1,3-Dichlorobenzene	ug/L	20	21.9	110	68.4-121	
1,4-Dichlorobenzene	ug/L	20	21.8	109	68.5-123	
2-Butanone (MEK)	ug/L	20	26.5	132	55.7-138	
2-Hexanone	ug/L	20	20.4	102	67-133	
4-Methyl-2-pentanone (MIBK)	ug/L	20	20.5	102	64.5-121	
Acetone	ug/L	20	20.1	100	57.6-168	
Benzene	ug/L	20	21.4	107	69.8-120	
Bromodichloromethane	ug/L	20	21.0	105	66.5-120	
Bromoform	ug/L	20	18.6	93	61.1-120	
Bromomethane	ug/L	20	24.0	120	10.6-200	
Carbon disulfide	ug/L	20	25.1	126	60.2-122	L3
Carbon tetrachloride	ug/L	20	22.6	113	60.1-127	
Chlorobenzene	ug/L	20	20.3	102	72-120	
Chloroethane	ug/L	20	24.4	122	36.8-142	
Chloroform	ug/L	20	22.3	112	69-122	
Chloromethane	ug/L	20	21.9	110	37.2-129	
cis-1,2-Dichloroethene	ug/L	20	22.5	113	69.5-123	
cis-1,3-Dichloropropene	ug/L	20	21.4	107	74.3-120	
Dibromochloromethane	ug/L	20	19.3	96	66.1-120	
Ethylbenzene	ug/L	20	20.7	104	70.9-124	
Isopropylbenzene (Cumene)	ug/L	20	24.4	122	68.3-129	
m&p-Xylene	ug/L	40	41.1	103	70.4-130	
Methylene Chloride	ug/L	20	24.2	121	61.5-125	
o-Xylene	ug/L	20	21.0	105	70.6-127	
Styrene	ug/L	20	20.1	101	69.9-120	
Tetrachloroethene	ug/L	20	20.9	105	63.4-121	
Toluene	ug/L	20	21.2	106	71.5-120	
trans-1,2-Dichloroethene	ug/L	20	22.1	111	64.1-120	
trans-1,3-Dichloropropene	ug/L	20	20.1	101	71-120	
Trichloroethene	ug/L	20	20.5	102	65.9-120	
Trichlorofluoromethane	ug/L	20	23.4	117	44.8-137	
Vinyl chloride	ug/L	20	23.2	116	51-127	
1,2-Dichloroethane-d4 (S)	%			105	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Toluene-d8 (S)	%			96	70-130	

## QUALIFIERS

Project: Essex-Hope Jamestown 41569181  
Pace Project No.: 3069925

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### BATCH QUALIFIERS

Batch: MSV/12793

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

### ANALYTE QUALIFIERS

L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Essex-Hope Jamestown 41569181

Pace Project No.: 3069925

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3069925001	PRE-CARB	EPA 8260	MSV/12793		
3069925002	PRIMARY-EFF	EPA 8260	MSV/12793		
3069925003	POST-CARB	EPA 8260	MSV/12793		
3069925004	TB-O1	EPA 8260	MSV/12793		

# 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  
 1522000  
 REGULATORY AGENCY  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER  
 Site Location: NY  
 STATE: NY

**Section A**  
 Required Client Information:  
 Company: URS CORP  
 Address: POSTER PLACE 4  
501 HOLIDAY DR, STE 300  
PITTSBURGH, PA 15220  
 Email To:  
 Phone: 412-503-4700 Fax: 412-503-4701  
 Requested Due Date/TAT: STANDARD

**Section B**  
 Required Project Information:  
 Report To: MARK DOWIAK  
 Copy To: VALERIE SIBETO  
 Purchase Order No.: 41569181  
 Project Name: ESSEX HOPE JMWESTWAL  
 Project Number: 41569181

**Section C**  
 Invoice Information:  
 Attention:  
 Company Name:  
 Address:  
 Pace Quote Reference:  
 Pace Project Manager:  
 Pace Profile #:

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	SAMPLE ID (A-Z, 0-9 / -)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	30609925 Pace Project No. / Lab I.D.			
				COMPOSITE START	COMPOSITE END/GRAB										
				DATE	TIME	DATE	TIME	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	
1		WTG	PRE-CARB	5/18/12	10:40		3								
2		WTG	PRIMARY-EFF	10:45			3								
3		WTG	POST-CARB	10:50			3								
4		WTG	POST-CARB	11:20			3								
5		WTG	POST-CARB	11:50			3								
6		WTG	POST-CARB	12:20			3								
7		WTG	TB-01	5/18/12	-		2								

**Section E**  
 ADDITIONAL COMMENTS: COMPOSITE FOUR (4)  
POST-CARB SAMPLES IN  
LAB AND REPORT AS  
POST-CARB COMPOSITE

RELINQUISHED BY / AFFILIATION: Valerie Sibeto  
 DATE: 5/18/12 TIME: 1300

ACCEPTED BY / AFFILIATION: Valerie Sibeto  
 DATE: 5/18/12 TIME: 1300

Temp in °C: 3.9  
 Received on: Y  
 Sealed Cooler: Y  
 Custody: N  
 Samples Intact: Y

SAMPLER NAME AND SIGNATURE: Valerie Sibeto  
 PRINT Name of SAMPLER: VALERIE SIBETO  
 SIGNATURE of SAMPLER: Valerie Sibeto  
 DATE Signed (MM/DD/YYYY): 5/18/12

ORIGINAL



Sample Condition Upon Receipt

Client Name: URS

Project # 3069925

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

Tracking #: 8726A076893

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

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used 5 6 7

Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 3.9

Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Optional  
Proj. Due Date:  
Proj. Name:

Date and Initials of person examining contents: ML 5/19

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

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

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

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

\_\_\_\_\_

\_\_\_\_\_

Project Manager Review: [Signature] Date: 5-21-11





page 2

Project Number: 3069925

Client Name: URS

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500 )	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear filter	Radchem NaIgene (125 / 250 / 500 / 1L)	Radchem NaIgene (1/2 gal. / 1 galL)	Cubtramer (500 ml / 4L)	Ziploc	Other	Other	
001-6	WT																								
100	↓																								

June 26, 2012

Mr. Mark Dowiak  
URS Corporation  
Foster Plaza 4  
501 Holiday Drive, Suite 300  
Pittsburgh, PA 15220

RE: Project: 41569181.10000 Essex/Hope  
Pace Project No.: 3071251

Dear Mr. Dowiak:

Enclosed are the analytical results for sample(s) received by the laboratory on June 12, 2012. 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.

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

Sincerely,



David A. Pichette for  
Timothy Reed  
timothy.reed@pacelabs.com  
Project Manager

Enclosures

cc: Ms. Valerie Sibeto, URS Corporation



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 41569181.10000 Essex/Hope

Pace Project No.: 3071251

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### Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4 Greensburg, PA 15601

ACCLASS DOD-ELAP Accreditation #: ADE-1544

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California/TNI Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH 0694

Delaware Certification

Florida/TNI Certification #: E87683

Guam/PADEP Certification

Hawaii/PADEP Certification

Idaho Certification

Illinois/PADEP Certification

Indiana/PADEP Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana/TNI Certification #: LA080002

Louisiana/TNI Certification #: 4086

Maine Certification #: PA0091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nevada Certification

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188

Utah/TNI Certification #: ANTE

Virgin Island/PADEP Certification

Virginia Certification #: 00112

Virginia VELAP (Cert # 460198)

Washington Certification #: C868

West Virginia Certification #: 143

Wisconsin/PADEP Certification

Wyoming Certification #: 8TMS-Q

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## REPORT OF LABORATORY ANALYSIS

Page 2 of 11

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## ANALYTICAL RESULTS

Project: 41569181.10000 Essex/Hope

Pace Project No.: 3071251

Sample: PRE-CARB		Lab ID: 3071251001	Collected: 06/11/12 14:00	Received: 06/12/12 16:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		06/15/12 23:33	67-64-1	
Benzene	8.2	ug/L	1.0	1		06/15/12 23:33	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		06/15/12 23:33	75-27-4	
Bromoform	ND	ug/L	5.0	1		06/15/12 23:33	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/15/12 23:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		06/15/12 23:33	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		06/15/12 23:33	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		06/15/12 23:33	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		06/15/12 23:33	108-90-7	
Chloroethane	ND	ug/L	5.0	1		06/15/12 23:33	75-00-3	
Chloroform	ND	ug/L	5.0	1		06/15/12 23:33	67-66-3	
Chloromethane	ND	ug/L	5.0	1		06/15/12 23:33	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		06/15/12 23:33	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		06/15/12 23:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		06/15/12 23:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		06/15/12 23:33	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		06/15/12 23:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		06/15/12 23:33	107-06-2	
1,1-Dichloroethene	18.5	ug/L	5.0	1		06/15/12 23:33	75-35-4	
cis-1,2-Dichloroethene	5380	ug/L	125	25		06/15/12 23:59	156-59-2	
trans-1,2-Dichloroethene	99.3	ug/L	5.0	1		06/15/12 23:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		06/15/12 23:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		06/15/12 23:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		06/15/12 23:33	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		06/15/12 23:33	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		06/15/12 23:33	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		06/15/12 23:33	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		06/15/12 23:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		06/15/12 23:33	108-10-1	
Styrene	ND	ug/L	5.0	1		06/15/12 23:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		06/15/12 23:33	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		06/15/12 23:33	127-18-4	
Toluene	ND	ug/L	5.0	1		06/15/12 23:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		06/15/12 23:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		06/15/12 23:33	79-00-5	
Trichloroethene	817	ug/L	125	25		06/15/12 23:59	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		06/15/12 23:33	75-69-4	
Vinyl chloride	426	ug/L	25.0	25		06/15/12 23:59	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		06/15/12 23:33	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		06/15/12 23:33	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100 %		70-130	1		06/15/12 23:33	460-00-4	
1,2-Dichloroethane-d4 (S)	107 %		70-130	1		06/15/12 23:33	17060-07-0	
Toluene-d8 (S)	101 %		70-130	1		06/15/12 23:33	2037-26-5	

## ANALYTICAL RESULTS

Project: 41569181.10000 Essex/Hope

Pace Project No.: 3071251

Sample: PRIMARY-EFF		Lab ID: 3071251002	Collected: 06/11/12 14:05	Received: 06/12/12 16:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		06/15/12 22:15	67-64-1	
Benzene	ND	ug/L	1.0	1		06/15/12 22:15	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		06/15/12 22:15	75-27-4	
Bromoform	ND	ug/L	5.0	1		06/15/12 22:15	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/15/12 22:15	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		06/15/12 22:15	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		06/15/12 22:15	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		06/15/12 22:15	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		06/15/12 22:15	108-90-7	
Chloroethane	ND	ug/L	5.0	1		06/15/12 22:15	75-00-3	
Chloroform	ND	ug/L	5.0	1		06/15/12 22:15	67-66-3	
Chloromethane	ND	ug/L	5.0	1		06/15/12 22:15	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		06/15/12 22:15	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		06/15/12 22:15	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		06/15/12 22:15	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		06/15/12 22:15	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		06/15/12 22:15	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		06/15/12 22:15	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		06/15/12 22:15	75-35-4	
cis-1,2-Dichloroethene	11.4	ug/L	5.0	1		06/15/12 22:15	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		06/15/12 22:15	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		06/15/12 22:15	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		06/15/12 22:15	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		06/15/12 22:15	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		06/15/12 22:15	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		06/15/12 22:15	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		06/15/12 22:15	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		06/15/12 22:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		06/15/12 22:15	108-10-1	
Styrene	ND	ug/L	5.0	1		06/15/12 22:15	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		06/15/12 22:15	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		06/15/12 22:15	127-18-4	
Toluene	ND	ug/L	5.0	1		06/15/12 22:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		06/15/12 22:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		06/15/12 22:15	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		06/15/12 22:15	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		06/15/12 22:15	75-69-4	
Vinyl chloride	6.2	ug/L	1.0	1		06/15/12 22:15	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		06/15/12 22:15	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		06/15/12 22:15	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	95 %		70-130	1		06/15/12 22:15	460-00-4	
1,2-Dichloroethane-d4 (S)	104 %		70-130	1		06/15/12 22:15	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		06/15/12 22:15	2037-26-5	

## ANALYTICAL RESULTS

Project: 41569181.10000 Essex/Hope

Pace Project No.: 3071251

**Sample: POST-CARB**      **Lab ID: 3071251003**      Collected: 06/11/12 15:40      Received: 06/12/12 16:50      Matrix: Water

Comments: • Post Carbon Samples collected at 14:10, 14:40, 15:10, and 15:40.  
• 8260B VOA: The sample was composited from four vials prior to 8260 VOA analysis.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		06/15/12 23:07	67-64-1	
Benzene	ND	ug/L	1.0	1		06/15/12 23:07	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		06/15/12 23:07	75-27-4	
Bromoform	ND	ug/L	5.0	1		06/15/12 23:07	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/15/12 23:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		06/15/12 23:07	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		06/15/12 23:07	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		06/15/12 23:07	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		06/15/12 23:07	108-90-7	
Chloroethane	ND	ug/L	5.0	1		06/15/12 23:07	75-00-3	
Chloroform	ND	ug/L	5.0	1		06/15/12 23:07	67-66-3	
Chloromethane	ND	ug/L	5.0	1		06/15/12 23:07	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		06/15/12 23:07	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		06/15/12 23:07	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		06/15/12 23:07	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		06/15/12 23:07	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		06/15/12 23:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		06/15/12 23:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		06/15/12 23:07	75-35-4	
cis-1,2-Dichloroethene	<b>34.0</b>	ug/L	5.0	1		06/15/12 23:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		06/15/12 23:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		06/15/12 23:07	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		06/15/12 23:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		06/15/12 23:07	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		06/15/12 23:07	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		06/15/12 23:07	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		06/15/12 23:07	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		06/15/12 23:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		06/15/12 23:07	108-10-1	
Styrene	ND	ug/L	5.0	1		06/15/12 23:07	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		06/15/12 23:07	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		06/15/12 23:07	127-18-4	
Toluene	ND	ug/L	5.0	1		06/15/12 23:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		06/15/12 23:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		06/15/12 23:07	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		06/15/12 23:07	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		06/15/12 23:07	75-69-4	
Vinyl chloride	<b>1.3</b>	ug/L	1.0	1		06/15/12 23:07	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		06/15/12 23:07	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		06/15/12 23:07	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	98 %		70-130	1		06/15/12 23:07	460-00-4	
1,2-Dichloroethane-d4 (S)	106 %		70-130	1		06/15/12 23:07	17060-07-0	
Toluene-d8 (S)	97 %		70-130	1		06/15/12 23:07	2037-26-5	

## ANALYTICAL RESULTS

Project: 41569181.10000 Essex/Hope

Pace Project No.: 3071251

Sample: TB-01		Lab ID: 3071251004	Collected: 06/11/12 00:01	Received: 06/12/12 16:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260						
Acetone	ND	ug/L	10.0	1		06/15/12 14:50	67-64-1	
Benzene	ND	ug/L	1.0	1		06/15/12 14:50	71-43-2	
Bromodichloromethane	ND	ug/L	5.0	1		06/15/12 14:50	75-27-4	
Bromoform	ND	ug/L	5.0	1		06/15/12 14:50	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/15/12 14:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		06/15/12 14:50	78-93-3	
Carbon disulfide	ND	ug/L	5.0	1		06/15/12 14:50	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		06/15/12 14:50	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		06/15/12 14:50	108-90-7	
Chloroethane	ND	ug/L	5.0	1		06/15/12 14:50	75-00-3	
Chloroform	ND	ug/L	5.0	1		06/15/12 14:50	67-66-3	
Chloromethane	ND	ug/L	5.0	1		06/15/12 14:50	74-87-3	
Dibromochloromethane	ND	ug/L	5.0	1		06/15/12 14:50	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		06/15/12 14:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		06/15/12 14:50	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		06/15/12 14:50	106-46-7	
1,1-Dichloroethane	ND	ug/L	5.0	1		06/15/12 14:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		06/15/12 14:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		06/15/12 14:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		06/15/12 14:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		06/15/12 14:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		06/15/12 14:50	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		06/15/12 14:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		06/15/12 14:50	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		06/15/12 14:50	100-41-4	
2-Hexanone	ND	ug/L	10.0	1		06/15/12 14:50	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		06/15/12 14:50	98-82-8	
Methylene Chloride	ND	ug/L	5.0	1		06/15/12 14:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		06/15/12 14:50	108-10-1	
Styrene	ND	ug/L	5.0	1		06/15/12 14:50	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		06/15/12 14:50	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		06/15/12 14:50	127-18-4	
Toluene	ND	ug/L	5.0	1		06/15/12 14:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		06/15/12 14:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		06/15/12 14:50	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		06/15/12 14:50	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		06/15/12 14:50	75-69-4	
Vinyl chloride	ND	ug/L	1.0	1		06/15/12 14:50	75-01-4	
m&p-Xylene	ND	ug/L	5.0	1		06/15/12 14:50	179601-23-1	
o-Xylene	ND	ug/L	5.0	1		06/15/12 14:50	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	95 %		70-130	1		06/15/12 14:50	460-00-4	
1,2-Dichloroethane-d4 (S)	107 %		70-130	1		06/15/12 14:50	17060-07-0	
Toluene-d8 (S)	102 %		70-130	1		06/15/12 14:50	2037-26-5	

### QUALITY CONTROL DATA

Project: 41569181.10000 Essex/Hope

Pace Project No.: 3071251

QC Batch: MSV/13018 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 3071251001, 3071251002, 3071251003, 3071251004

METHOD BLANK: 452606 Matrix: Water  
Associated Lab Samples: 3071251001, 3071251002, 3071251003, 3071251004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5.0	06/15/12 14:24	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	06/15/12 14:24	
1,1,2-Trichloroethane	ug/L	ND	5.0	06/15/12 14:24	
1,1-Dichloroethane	ug/L	ND	5.0	06/15/12 14:24	
1,1-Dichloroethene	ug/L	ND	5.0	06/15/12 14:24	
1,2-Dichlorobenzene	ug/L	ND	5.0	06/15/12 14:24	
1,2-Dichloroethane	ug/L	ND	5.0	06/15/12 14:24	
1,2-Dichloropropane	ug/L	ND	5.0	06/15/12 14:24	
1,3-Dichlorobenzene	ug/L	ND	5.0	06/15/12 14:24	
1,4-Dichlorobenzene	ug/L	ND	5.0	06/15/12 14:24	
2-Butanone (MEK)	ug/L	ND	10.0	06/15/12 14:24	
2-Hexanone	ug/L	ND	10.0	06/15/12 14:24	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	06/15/12 14:24	
Acetone	ug/L	ND	10.0	06/15/12 14:24	
Benzene	ug/L	ND	1.0	06/15/12 14:24	
Bromodichloromethane	ug/L	ND	5.0	06/15/12 14:24	
Bromoform	ug/L	ND	5.0	06/15/12 14:24	
Bromomethane	ug/L	ND	5.0	06/15/12 14:24	
Carbon disulfide	ug/L	ND	5.0	06/15/12 14:24	
Carbon tetrachloride	ug/L	ND	5.0	06/15/12 14:24	
Chlorobenzene	ug/L	ND	5.0	06/15/12 14:24	
Chloroethane	ug/L	ND	5.0	06/15/12 14:24	
Chloroform	ug/L	ND	5.0	06/15/12 14:24	
Chloromethane	ug/L	ND	5.0	06/15/12 14:24	
cis-1,2-Dichloroethene	ug/L	ND	5.0	06/15/12 14:24	
cis-1,3-Dichloropropene	ug/L	ND	5.0	06/15/12 14:24	
Dibromochloromethane	ug/L	ND	5.0	06/15/12 14:24	
Ethylbenzene	ug/L	ND	5.0	06/15/12 14:24	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	06/15/12 14:24	
m&p-Xylene	ug/L	ND	5.0	06/15/12 14:24	
Methylene Chloride	ug/L	ND	5.0	06/15/12 14:24	B,C9
o-Xylene	ug/L	ND	5.0	06/15/12 14:24	
Styrene	ug/L	ND	5.0	06/15/12 14:24	
Tetrachloroethene	ug/L	ND	5.0	06/15/12 14:24	
Toluene	ug/L	ND	5.0	06/15/12 14:24	
trans-1,2-Dichloroethene	ug/L	ND	5.0	06/15/12 14:24	
trans-1,3-Dichloropropene	ug/L	ND	5.0	06/15/12 14:24	
Trichloroethene	ug/L	ND	5.0	06/15/12 14:24	
Trichlorofluoromethane	ug/L	ND	5.0	06/15/12 14:24	
Vinyl chloride	ug/L	ND	1.0	06/15/12 14:24	
1,2-Dichloroethane-d4 (S)	%	106	70-130	06/15/12 14:24	
4-Bromofluorobenzene (S)	%	95	70-130	06/15/12 14:24	
Toluene-d8 (S)	%	98	70-130	06/15/12 14:24	

Date: 06/26/2012 02:37 PM

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 41569181.10000 Essex/Hope

Pace Project No.: 3071251

LABORATORY CONTROL SAMPLE: 452607

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.1	96	64.3-127	
1,1,2,2-Tetrachloroethane	ug/L	20	18.3	91	64.6-121	
1,1,2-Trichloroethane	ug/L	20	19.3	96	75.6-120	
1,1-Dichloroethane	ug/L	20	19.0	95	68.5-122	
1,1-Dichloroethene	ug/L	20	18.5	93	57.1-120	
1,2-Dichlorobenzene	ug/L	20	18.2	91	69.6-120	
1,2-Dichloroethane	ug/L	20	19.2	96	60.5-133	
1,2-Dichloropropane	ug/L	20	19.3	96	71-120	
1,3-Dichlorobenzene	ug/L	20	18.1	91	68.4-121	
1,4-Dichlorobenzene	ug/L	20	18.1	91	68.5-123	
2-Butanone (MEK)	ug/L	20	21.1	105	55.7-138	
2-Hexanone	ug/L	20	21.0	105	67-133	
4-Methyl-2-pentanone (MIBK)	ug/L	20	19.7	99	64.5-121	
Acetone	ug/L	20	23.9	120	57.6-168	
Benzene	ug/L	20	19.2	96	69.8-120	
Bromodichloromethane	ug/L	20	19.3	96	66.5-120	
Bromoform	ug/L	20	18.3	92	61.1-120	
Bromomethane	ug/L	20	17.1	86	10.6-200	
Carbon disulfide	ug/L	20	21.7	109	60.2-122	
Carbon tetrachloride	ug/L	20	18.6	93	60.1-127	
Chlorobenzene	ug/L	20	18.4	92	72-120	
Chloroethane	ug/L	20	18.7	93	36.8-142	
Chloroform	ug/L	20	18.1	91	69-122	
Chloromethane	ug/L	20	20.1	101	37.2-129	
cis-1,2-Dichloroethene	ug/L	20	19.2	96	69.5-123	
cis-1,3-Dichloropropene	ug/L	20	19.7	98	74.3-120	
Dibromochloromethane	ug/L	20	18.2	91	66.1-120	
Ethylbenzene	ug/L	20	17.8	89	70.9-124	
Isopropylbenzene (Cumene)	ug/L	20	19.7	99	68.3-129	
m&p-Xylene	ug/L	40	36.7	92	70.4-130	
Methylene Chloride	ug/L	20	21.1	105	61.5-125	
o-Xylene	ug/L	20	18.5	92	70.6-127	
Styrene	ug/L	20	19.1	95	69.9-120	
Tetrachloroethene	ug/L	20	17.7	89	63.4-121	
Toluene	ug/L	20	18.7	93	71.5-120	
trans-1,2-Dichloroethene	ug/L	20	18.9	94	64.1-120	
trans-1,3-Dichloropropene	ug/L	20	19.4	97	71-120	
Trichloroethene	ug/L	20	18.2	91	65.9-120	
Trichlorofluoromethane	ug/L	20	20.0	100	44.8-137	
Vinyl chloride	ug/L	20	19.2	96	51-127	
1,2-Dichloroethane-d4 (S)	%			107	70-130	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			100	70-130	

### QUALITY CONTROL DATA

Project: 41569181.10000 Essex/Hope

Pace Project No.: 3071251

Parameter	3071251002		MS		MSD		MS		MSD		% Rec	RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits				
1,1,1-Trichloroethane	ug/L	ND	20	20	18.0	19.4	90	97	64.3-127	7			
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	16.7	17.6	83	88	64.6-121	5			
1,1,2-Trichloroethane	ug/L	ND	20	20	17.7	18.6	89	93	75.6-120	5			
1,1-Dichloroethane	ug/L	ND	20	20	18.2	19.3	91	96	68.5-122	6			
1,1-Dichloroethene	ug/L	ND	20	20	19.1	19.6	95	98	57.1-120	3			
1,2-Dichlorobenzene	ug/L	ND	20	20	15.8	16.9	79	84	69.6-120	7			
1,2-Dichloroethane	ug/L	ND	20	20	18.7	19.8	93	99	60.5-133	6			
1,2-Dichloropropane	ug/L	ND	20	20	18.4	18.9	92	94	71-120	2			
1,3-Dichlorobenzene	ug/L	ND	20	20	16.3	16.8	81	84	68.4-121	3			
1,4-Dichlorobenzene	ug/L	ND	20	20	16.5	16.9	82	84	68.5-123	2			
2-Butanone (MEK)	ug/L	ND	20	20	19.8	22.6	99	113	55.7-138	13			
2-Hexanone	ug/L	ND	20	20	17.9	20.8	90	104	67-133	15			
4-Methyl-2-pentanone (MIBK)	ug/L	ND	20	20	18.3	20.2	91	101	64.5-121	10			
Acetone	ug/L	ND	20	20	18.7	22.9	74	94	57.6-168	20			
Benzene	ug/L	ND	20	20	18.4	19.1	92	96	69.8-120	4			
Bromodichloromethane	ug/L	ND	20	20	17.7	17.9	89	89	66.5-120	1			
Bromoform	ug/L	ND	20	20	15.4	15.7	77	78	61.1-120	2			
Bromomethane	ug/L	ND	20	20	5.4	7.4	27	37	10.6-200	30			
Carbon disulfide	ug/L	ND	20	20	20.3	17.8	102	89	60.2-122	14			
Carbon tetrachloride	ug/L	ND	20	20	17.7	18.1	88	90	60.1-127	2			
Chlorobenzene	ug/L	ND	20	20	16.9	18.0	85	90	72-120	6			
Chloroethane	ug/L	ND	20	20	21.1	23.1	105	116	36.8-142	9			
Chloroform	ug/L	ND	20	20	17.1	17.8	86	89	69-122	4			
Chloromethane	ug/L	ND	20	20	20.1	22.5	100	112	37.2-129	11			
cis-1,2-Dichloroethene	ug/L	11.4	20	20	29.7	31.3	91	99	69.5-123	5			
cis-1,3-Dichloropropene	ug/L	ND	20	20	16.5	17.5	83	87	74.3-120	6			
Dibromochloromethane	ug/L	ND	20	20	15.8	15.8	79	79	66.1-120	.1			
Ethylbenzene	ug/L	ND	20	20	17.2	17.6	86	88	70.9-124	2			
Isopropylbenzene (Cumene)	ug/L	ND	20	20	18.4	18.9	92	95	68.3-129	3			
m&p-Xylene	ug/L	ND	40	40	34.7	36.5	84	89	70.4-130	5			
Methylene Chloride	ug/L	ND	20	20	18.7	19.9	94	100	61.5-125	6			
o-Xylene	ug/L	ND	20	20	16.9	17.3	85	87	70.6-127	2			
Styrene	ug/L	ND	20	20	17.0	17.7	85	89	69.9-120	4			
Tetrachloroethane	ug/L	ND	20	20	17.4	17.8	87	89	63.4-121	2			
Toluene	ug/L	ND	20	20	17.4	18.3	87	92	71.5-120	5			
trans-1,2-Dichloroethene	ug/L	ND	20	20	18.6	19.3	93	96	64.1-120	3			
trans-1,3-Dichloropropene	ug/L	ND	20	20	16.9	17.8	85	89	71-120	5			
Trichloroethene	ug/L	ND	20	20	17.6	17.6	88	88	65.9-120	.02			
Trichlorofluoromethane	ug/L	ND	20	20	24.5	25.7	123	128	44.8-137	5			
Vinyl chloride	ug/L	6.2	20	20	28.3	29.6	111	117	51-127	4			
1,2-Dichloroethane-d4 (S)	%						113	115	70-130				
4-Bromofluorobenzene (S)	%						97	98	70-130				
Toluene-d8 (S)	%						101	101	70-130				

## QUALIFIERS

Project: 41569181.10000 Essex/Hope  
Pace Project No.: 3071251

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

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.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

C9 Common Laboratory Contaminant.

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 41569181.10000 Essex/Hope

Pace Project No.: 3071251

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Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3071251001	PRE-CARB	EPA 8260	MSV/13018		
3071251002	PRIMARY-EFF	EPA 8260	MSV/13018		
3071251003	POST-CARB	EPA 8260	MSV/13018		
3071251004	TB-01	EPA 8260	MSV/13018		



# 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  
 1515758

**Section A**  
 Required Client Information:  
 Company: **MRS CORP**  
 Address: **501 HOLIDAY DR. STE 300**  
**FOSTER PLAZA 4**  
**500 SBUCKETT RD 15720**  
 Email To:  
 Project Name: **412-503-4700**  
 Project Number: **412-503-4701**  
 Requested Due Date (DAT): **STANDARD**

**Section B**  
 Required Project Information:  
 Report To: **MARK DOWIAK**  
 Copy To: **VALERIE SIBETO**  
 Purchase Order No.: **41509181**  
 Project Name: **ESSEX/HOPE JAMESTOWN**  
 Project Number: **41518181.0000**

**Section C**  
 Invoice Information:  
 Attention:  
 Company Name:  
 Address:  
 Pace Quote Reference:  
 Pace Project Manager:  
 Pace Profile #:

**REGULATORY AGENCY**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER

Site Location  
 STATE: **NY**

ITEM #	SAMPLE ID (A-Z, 0-9, /, -) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX CODE Drinking Water: DW Waste Water: WW Product: P Soil/Solid: SL Oil: OL Wipe: WP Air: AR Tissue: TS Other: OT	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP) (see valid codes to left)	MATRIX CODE (see valid codes to left)	# OF CONTAINERS	Preservatives						Analysis Test ↓ VOCs 8260	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.  3571251
			COMPOSITE START	COMPOSITE END/GRAB				DATE	TIME	DATE	TIME	Unpreserved	H <sub>2</sub> SO <sub>4</sub>				
1	PRE-CARB			6.11.12	1400	WTG	2										
2	PRIMARY-EFF			6.11.12	1405		3										
3	POST-CARB			6.11.12	1410		3										
4	POST-CARB			6.11.12	1440		3										
5	POST-CARB			6.11.12	1510		2										
6	POST-CARB			6.11.12	1540		2										
7	TB-01			6.11.12	-		2										

**ADDITIONAL COMMENTS**  
 COMPOSITE FOUR (4)  
 POST-CARB SAMPLES  
 IN LAB AND REPORT  
 AS POST-CARB COMPOSITE

RELINQUISHED BY / AFFILIATION: **Valery Ann** DATE: **6.11.12** TIME: **14030**  
 ACCEPTED BY / AFFILIATION: **Valery Ann** DATE: **6.11.12** TIME: **1630**

RECEIVED ON: **6/11/12** RECEIVED BY: **Valery Ann**  
 CUSTODY: **Y** SEALED COOLER: **N** SAMPLES INTACT: **Y**

Temp in °C: \_\_\_\_\_

SAMPLER NAME AND SIGNATURE: **VALERIE SIBETO**  
 PRINT Name of SAMPLER: **Valery Ann**  
 SIGNATURE of SAMPLER: *Valery Ann*  
 DATE Signed (MM/DD/YYYY): **6.11.12**



Sample Condition Upon Receipt

Client Name: WRS

Project # 3571251

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

Tracking #: 5726410256908

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 5 6 7 Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun

Cooler Temperature 4.1 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: <u>WRS 6/12/12</u>
--

Comments:

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

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

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

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

Project Manager Review: [Signature]

Date: 6/13/12

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)



Project Number: 3011251

Client Name: WRP

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500 )	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	N	O & G (1L)	TFH (1L)	VOA (40 ml / 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem NaIgene (125 / 250 / 500 / 1L)	Radchem NaIgene (1/2 gal. / 1 gal.L)	Cuttrainer (500 ml / 4L)	Ziploc	Other	Other	
100	WRP																									
200																										
300																										
400																										
500																										