



5301 Northshore Drive  
North Little Rock, AR 72118  
Telephone: 501-682-0744

**Client Report For:** Exxon Oil Spill Well Sampling 2013 2709-2718  
**Attention:**  
**Client Address:**

,

**Report Date:** August 16, 2013  
**LAB ID:** AR13AUG01-01  
**Comment:**

Approved By: \_\_\_\_\_

Date: August 16, 2013

**Client:** Special Samples

**Client Sample ID:** TW 44-01

**Lab ID:** 2013-2709

**Collection Date:** 7/31/2013 9:45:00 AM

**Matrix:** Water

Analyses

**Volatile Organics by GCMS**

**EPA 8260C**

**Batch: 13080208 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
<i>Dibromofluoromethane (% Recovery)</i>	106	70-130			%
<i>1,2-Dichloroethane-d4 (% Recovery)</i>	102	70-130			%
<i>Toluene-d8 (% Recovery)</i>	102	70-130			%
<i>4-Bromofluorobenzene (% Recovery)</i>	109	70-130			%
Dichlorodifluoromethane	<1.12	1.12	1.12		ug/L
Chloromethane	<0.58	0.58	0.58		ug/L
Vinyl chloride	<0.82	0.82	0.82		ug/L
Bromomethane	<3.9	3.9	3.90		ug/L
Chloroethane	<2.68	2.68	2.68		ug/L
Trichlorofluoromethane	<0.51	0.51	0.51		ug/L
1,1-Dichloroethene	<0.43	0.43	0.43		ug/L
Acetone	<10.5	10.5	10.5		ug/L
Methylene chloride	<2.5	2.5	2.5		ug/L
Methyl tert-butyl ether	<0.83	0.83	0.83		ug/L
trans-1,2-Dichloroethene	<0.59	0.59	0.59		ug/L
1,1-Dichloroethane	<0.42	0.42	0.42		ug/L
Methyl ethyl ketone	<12.8	12.8	12.8		ug/L
cis-1,2-Dichloroethene	<1.15	1.15	1.15		ug/L
2,2-Dichloropropane	<0.81	0.81	0.81		ug/L
Bromochloromethane	<0.66	0.66	0.66		ug/L
Chloroform	<0.27	0.27	0.27		ug/L
1,1,1-Trichloroethane	<0.46	0.46	0.46		ug/L
1,1-Dichloropropene	<0.59	0.59	0.59		ug/L
Carbon tetrachloride	<0.6	0.6	0.6		ug/L
Benzene	<0.66	0.66	0.66		ug/L
1,2-Dichloroethane	<1.15	1.15	1.15		ug/L
Trichloroethene	<0.6	0.6	0.60		ug/L
1,2-Dichloropropane	<0.98	0.98	0.98		ug/L
Dibromomethane	<1.78	1.78	1.78		ug/L
Bromodichloromethane	<0.65	0.65	0.65		ug/L
cis-1,3-Dichloropropene	<0.86	0.86	0.86		ug/L

Methyl isobutyl ketone	<8.1	8.1	8.10	ug/L
Toluene	<0.57	0.57	0.57	ug/L
trans-1,3-Dichloropropene	<0.84	0.84	0.84	ug/L
1,1,2-Trichloroethane	<0.78	0.78	0.78	ug/L
2-Hexanone	<9.5	9.5	9.5	ug/L
Tetrachloroethene	<0.96	0.96	0.96	ug/L
1,3-Dichloropropane	<0.94	0.94	0.94	ug/L
Dibromochloromethane	<1.25	1.25	1.25	ug/L
1,2-Dibromoethane (EDB)	<0.68	0.68	0.68	ug/L
Chlorobenzene	<0.62	0.62	0.62	ug/L
Ethylbenzene	<0.51	0.51	0.51	ug/L
1,1,1,2-Tetrachloroethane	<0.57	0.57	0.57	ug/L
m,p-Xylene	<1.2	1.2	1.2	ug/L
o-Xylene	<0.5	0.5	0.5	ug/L
Styrene	<0.53	0.53	0.53	ug/L
Bromoform	<1.56	1.56	1.56	ug/L
Isopropylbenzene	<0.59	0.59	0.59	ug/L
1,1,1,2,2-Tetrachloroethane	<0.39	0.39	0.39	ug/L
1,2,3-Trichloropropane	<1.83	1.83	1.83	ug/L
n-Propylbenzene	<0.49	0.49	0.49	ug/L
Bromobenzene	<0.5	0.5	0.5	ug/L
1,3,5-Trimethylbenzene	<0.3	0.3	0.30	ug/L
2-Chlorotoluene	<0.66	0.66	0.66	ug/L
4-Chlorotoluene	<0.8	0.8	0.80	ug/L
tert-Butylbenzene	<0.85	0.85	0.85	ug/L
1,2,4-Trimethylbenzene	<0.46	0.46	0.46	ug/L
sec-Butylbenzene	<0.63	0.63	0.63	ug/L
p-Isopropyltoluene	<0.59	0.59	0.59	ug/L
1,3-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,4-Dichlorobenzene	<0.53	0.53	0.53	ug/L
n-Butylbenzene	<0.72	0.72	0.72	ug/L
1,2-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,2-Dibromo-3-chloropropane	<0.86	0.86	0.86	ug/L
1,2,4-Trichlorobenzene	<1.14	1.14	1.14	ug/L
Naphthalene	<1.53	1.53	1.53	ug/L
1,2,3-Trichlorobenzene	<1.3	1.3	1.3	ug/L
Dilution Factor	1			
Analyzed By	Jeff Ruehr			
Analysis Date/Time	8/1/2013 3:31 PM			

**Client:** Special Samples

**Client Sample ID:** TW 44-02

**Lab ID:** 2013-2710

**Collection Date:** 7/31/2013 10:15:00 AM

**Matrix:** Water

Analyses

**Volatile Organics by GCMS**

**EPA 8260C**

**Batch: 13080208 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
<i>Dibromofluoromethane (% Recovery)</i>	102	70-130			%
<i>1,2-Dichloroethane-d4 (% Recovery)</i>	99.6	70-130			%
<i>Toluene-d8 (% Recovery)</i>	100	70-130			%
<i>4-Bromofluorobenzene (% Recovery)</i>	116	70-130			%
Dichlorodifluoromethane	<1.12	1.12	1.12		ug/L
Chloromethane	<0.58	0.58	0.58		ug/L
Vinyl chloride	<0.82	0.82	0.82		ug/L
Bromomethane	<3.9	3.9	3.90		ug/L
Chloroethane	<2.68	2.68	2.68		ug/L
Trichlorofluoromethane	<0.51	0.51	0.51		ug/L
1,1-Dichloroethene	<0.43	0.43	0.43		ug/L
Acetone	<10.5	10.5	10.5		ug/L
Methylene chloride	<2.5	2.5	2.5		ug/L
Methyl tert-butyl ether	<0.83	0.83	0.83		ug/L
trans-1,2-Dichloroethene	<0.59	0.59	0.59		ug/L
1,1-Dichloroethane	<0.42	0.42	0.42		ug/L
Methyl ethyl ketone	<12.8	12.8	12.8		ug/L
cis-1,2-Dichloroethene	<1.15	1.15	1.15		ug/L
2,2-Dichloropropane	<0.81	0.81	0.81		ug/L
Bromochloromethane	<0.66	0.66	0.66		ug/L
Chloroform	<0.27	0.27	0.27		ug/L
1,1,1-Trichloroethane	<0.46	0.46	0.46		ug/L
1,1-Dichloropropene	<0.59	0.59	0.59		ug/L
Carbon tetrachloride	<0.6	0.6	0.6		ug/L
Benzene	<0.66	0.66	0.66		ug/L
1,2-Dichloroethane	<1.15	1.15	1.15		ug/L
Trichloroethene	<0.6	0.6	0.60		ug/L
1,2-Dichloropropane	<0.98	0.98	0.98		ug/L
Dibromomethane	<1.78	1.78	1.78		ug/L
Bromodichloromethane	<0.65	0.65	0.65		ug/L
cis-1,3-Dichloropropene	<0.86	0.86	0.86		ug/L
Methyl isobutyl ketone	<8.1	8.1	8.10		ug/L

Toluene	<0.57	0.57	0.57	ug/L
trans-1,3-Dichloropropene	<0.84	0.84	0.84	ug/L
1,1,2-Trichloroethane	<0.78	0.78	0.78	ug/L
2-Hexanone	<9.5	9.5	9.5	ug/L
Tetrachloroethene	<0.96	0.96	0.96	ug/L
1,3-Dichloropropane	<0.94	0.94	0.94	ug/L
Dibromochloromethane	<1.25	1.25	1.25	ug/L
1,2-Dibromoethane (EDB)	<0.68	0.68	0.68	ug/L
Chlorobenzene	<0.62	0.62	0.62	ug/L
Ethylbenzene	<0.51	0.51	0.51	ug/L
1,1,1,2-Tetrachloroethane	<0.57	0.57	0.57	ug/L
m,p-Xylene	<1.2	1.2	1.2	ug/L
o-Xylene	<0.5	0.5	0.5	ug/L
Styrene	<0.53	0.53	0.53	ug/L
Bromoform	<1.56	1.56	1.56	ug/L
Isopropylbenzene	<0.59	0.59	0.59	ug/L
1,1,1,2,2-Tetrachloroethane	<0.39	0.39	0.39	ug/L
1,2,3-Trichloropropane	<1.83	1.83	1.83	ug/L
n-Propylbenzene	<0.49	0.49	0.49	ug/L
Bromobenzene	<0.5	0.5	0.5	ug/L
1,3,5-Trimethylbenzene	<0.3	0.3	0.30	ug/L
2-Chlorotoluene	<0.66	0.66	0.66	ug/L
4-Chlorotoluene	<0.8	0.8	0.80	ug/L
tert-Butylbenzene	<0.85	0.85	0.85	ug/L
1,2,4-Trimethylbenzene	<0.46	0.46	0.46	ug/L
sec-Butylbenzene	<0.63	0.63	0.63	ug/L
p-Isopropyltoluene	<0.59	0.59	0.59	ug/L
1,3-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,4-Dichlorobenzene	<0.53	0.53	0.53	ug/L
n-Butylbenzene	<0.72	0.72	0.72	ug/L
1,2-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,2-Dibromo-3-chloropropane	<0.86	0.86	0.86	ug/L
1,2,4-Trichlorobenzene	<1.14	1.14	1.14	ug/L
Naphthalene	<1.53	1.53	1.53	ug/L
1,2,3-Trichlorobenzene	<1.3	1.3	1.3	ug/L
Dilution Factor	1			
Analyzed By	Jeff Ruehr			
Analysis Date/Time	8/1/2013 3:56 PM			

<b>Client:</b> Special Samples	<b>Client Sample ID:</b> TW 44-03
<b>Lab ID:</b> 2013-2711	<b>Collection Date:</b> 7/31/2013 10:30:00 AM
<b>Matrix:</b> Water	

Analyses

**Volatile Organics by GCMS**

**EPA 8260C**

**Batch: 13080208 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Dibromofluoromethane (% Recovery)	106	70-130			%
1,2-Dichloroethane-d4 (% Recovery)	102	70-130			%
Toluene-d8 (% Recovery)	101	70-130			%
4-Bromofluorobenzene (% Recovery)	110	70-130			%
Dichlorodifluoromethane	<1.12	1.12	1.12		ug/L
Chloromethane	<0.58	0.58	0.58		ug/L
Vinyl chloride	<0.82	0.82	0.82		ug/L
Bromomethane	<3.9	3.9	3.90		ug/L
Chloroethane	<2.68	2.68	2.68		ug/L
Trichlorofluoromethane	<0.51	0.51	0.51		ug/L
1,1-Dichloroethene	<0.43	0.43	0.43		ug/L
Acetone	<10.5	10.5	10.5		ug/L
Methylene chloride	<2.5	2.5	2.5		ug/L
Methyl tert-butyl ether	<0.83	0.83	0.83		ug/L
trans-1,2-Dichloroethene	<0.59	0.59	0.59		ug/L
1,1-Dichloroethane	<0.42	0.42	0.42		ug/L
Methyl ethyl ketone	<12.8	12.8	12.8		ug/L
cis-1,2-Dichloroethene	<1.15	1.15	1.15		ug/L
2,2-Dichloropropane	<0.81	0.81	0.81		ug/L
Bromochloromethane	<0.66	0.66	0.66		ug/L
Chloroform	<0.27	0.27	0.27		ug/L
1,1,1-Trichloroethane	<0.46	0.46	0.46		ug/L
1,1-Dichloropropene	<0.59	0.59	0.59		ug/L
Carbon tetrachloride	<0.6	0.6	0.6		ug/L
Benzene	<0.66	0.66	0.66		ug/L
1,2-Dichloroethane	<1.15	1.15	1.15		ug/L
Trichloroethene	<0.6	0.6	0.60		ug/L
1,2-Dichloropropane	<0.98	0.98	0.98		ug/L
Dibromomethane	<1.78	1.78	1.78		ug/L
Bromodichloromethane	<0.65	0.65	0.65		ug/L
cis-1,3-Dichloropropene	<0.86	0.86	0.86		ug/L
Methyl isobutyl ketone	<8.1	8.1	8.10		ug/L

Toluene	<0.57	0.57	0.57	ug/L
trans-1,3-Dichloropropene	<0.84	0.84	0.84	ug/L
1,1,2-Trichloroethane	<0.78	0.78	0.78	ug/L
2-Hexanone	<9.5	9.5	9.5	ug/L
Tetrachloroethene	<0.96	0.96	0.96	ug/L
1,3-Dichloropropane	<0.94	0.94	0.94	ug/L
Dibromochloromethane	<1.25	1.25	1.25	ug/L
1,2-Dibromoethane (EDB)	<0.68	0.68	0.68	ug/L
Chlorobenzene	<0.62	0.62	0.62	ug/L
Ethylbenzene	<0.51	0.51	0.51	ug/L
1,1,1,2-Tetrachloroethane	<0.57	0.57	0.57	ug/L
m,p-Xylene	<1.2	1.2	1.2	ug/L
o-Xylene	<0.5	0.5	0.5	ug/L
Styrene	<0.53	0.53	0.53	ug/L
Bromoform	<1.56	1.56	1.56	ug/L
Isopropylbenzene	<0.59	0.59	0.59	ug/L
1,1,1,2,2-Tetrachloroethane	<0.39	0.39	0.39	ug/L
1,2,3-Trichloropropane	<1.83	1.83	1.83	ug/L
n-Propylbenzene	<0.49	0.49	0.49	ug/L
Bromobenzene	<0.5	0.5	0.5	ug/L
1,3,5-Trimethylbenzene	<0.3	0.3	0.30	ug/L
2-Chlorotoluene	<0.66	0.66	0.66	ug/L
4-Chlorotoluene	<0.8	0.8	0.80	ug/L
tert-Butylbenzene	<0.85	0.85	0.85	ug/L
1,2,4-Trimethylbenzene	<0.46	0.46	0.46	ug/L
sec-Butylbenzene	<0.63	0.63	0.63	ug/L
p-Isopropyltoluene	<0.59	0.59	0.59	ug/L
1,3-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,4-Dichlorobenzene	<0.53	0.53	0.53	ug/L
n-Butylbenzene	<0.72	0.72	0.72	ug/L
1,2-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,2-Dibromo-3-chloropropane	<0.86	0.86	0.86	ug/L
1,2,4-Trichlorobenzene	<1.14	1.14	1.14	ug/L
Naphthalene	<1.53	1.53	1.53	ug/L
1,2,3-Trichlorobenzene	<1.3	1.3	1.3	ug/L
Dilution Factor	1			
Analyzed By	Jeff Ruehr			
Analysis Date/Time	8/1/2013 4:22 PM			

**Client:** Special Samples

**Client Sample ID:** TW 36-02

**Lab ID:** 2013-2712

**Collection Date:** 7/31/2013 11:20:00 AM

**Matrix:** Water

Analyses

**Volatile Organics by GCMS**

**EPA 8260C**

**Batch: 13080208 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
<i>Dibromofluoromethane (% Recovery)</i>	109	70-130			%
<i>1,2-Dichloroethane-d4 (% Recovery)</i>	104	70-130			%
<i>Toluene-d8 (% Recovery)</i>	103	70-130			%
<i>4-Bromofluorobenzene (% Recovery)</i>	112	70-130			%
Dichlorodifluoromethane	<1.12	1.12	1.12		ug/L
Chloromethane	<0.58	0.58	0.58		ug/L
Vinyl chloride	<0.82	0.82	0.82		ug/L
Bromomethane	<3.9	3.9	3.90		ug/L
Chloroethane	<2.68	2.68	2.68		ug/L
Trichlorofluoromethane	<0.51	0.51	0.51		ug/L
1,1-Dichloroethene	<0.43	0.43	0.43		ug/L
Acetone	86.2	10.5	10.5		ug/L
Methylene chloride	<2.5	2.5	2.5		ug/L
Methyl tert-butyl ether	<0.83	0.83	0.83		ug/L
trans-1,2-Dichloroethene	<0.59	0.59	0.59		ug/L
1,1-Dichloroethane	<0.42	0.42	0.42		ug/L
Methyl ethyl ketone	<12.8	12.8	12.8		ug/L
cis-1,2-Dichloroethene	<1.15	1.15	1.15		ug/L
2,2-Dichloropropane	<0.81	0.81	0.81		ug/L
Bromochloromethane	<0.66	0.66	0.66		ug/L
Chloroform	<0.27	0.27	0.27		ug/L
1,1,1-Trichloroethane	<0.46	0.46	0.46		ug/L
1,1-Dichloropropene	<0.59	0.59	0.59		ug/L
Carbon tetrachloride	<0.6	0.6	0.6		ug/L
Benzene	3.05	0.66	0.66		ug/L
1,2-Dichloroethane	<1.15	1.15	1.15		ug/L
Trichloroethene	<0.6	0.6	0.60		ug/L
1,2-Dichloropropane	<0.98	0.98	0.98		ug/L
Dibromomethane	<1.78	1.78	1.78		ug/L
Bromodichloromethane	<0.65	0.65	0.65		ug/L
cis-1,3-Dichloropropene	<0.86	0.86	0.86		ug/L
Methyl isobutyl ketone	<8.1	8.1	8.10		ug/L



Toluene	<0.57	0.57	0.57	ug/L
trans-1,3-Dichloropropene	<0.84	0.84	0.84	ug/L
1,1,2-Trichloroethane	<0.78	0.78	0.78	ug/L
2-Hexanone	<9.5	9.5	9.5	ug/L
Tetrachloroethene	<0.96	0.96	0.96	ug/L
1,3-Dichloropropane	<0.94	0.94	0.94	ug/L
Dibromochloromethane	<1.25	1.25	1.25	ug/L
1,2-Dibromoethane (EDB)	<0.68	0.68	0.68	ug/L
Chlorobenzene	<0.62	0.62	0.62	ug/L
Ethylbenzene	0.856	0.51	0.51	ug/L
1,1,1,2-Tetrachloroethane	<0.57	0.57	0.57	ug/L
m,p-Xylene	6.06	1.2	1.2	ug/L
o-Xylene	2.11	0.5	0.5	ug/L
Styrene	<0.53	0.53	0.53	ug/L
Bromoform	<1.56	1.56	1.56	ug/L
Isopropylbenzene	<0.59	0.59	0.59	ug/L
1,1,1,2,2-Tetrachloroethane	<0.39	0.39	0.39	ug/L
1,2,3-Trichloropropane	<1.83	1.83	1.83	ug/L
n-Propylbenzene	<0.49	0.49	0.49	ug/L
Bromobenzene	<0.5	0.5	0.5	ug/L
1,3,5-Trimethylbenzene	0.595	0.3	0.30	ug/L
2-Chlorotoluene	<0.66	0.66	0.66	ug/L
4-Chlorotoluene	<0.8	0.8	0.80	ug/L
tert-Butylbenzene	<0.85	0.85	0.85	ug/L
1,2,4-Trimethylbenzene	1.23	0.46	0.46	ug/L
sec-Butylbenzene	<0.63	0.63	0.63	ug/L
p-Isopropyltoluene	<0.59	0.59	0.59	ug/L
1,3-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,4-Dichlorobenzene	<0.53	0.53	0.53	ug/L
n-Butylbenzene	<0.72	0.72	0.72	ug/L
1,2-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,2-Dibromo-3-chloropropane	<0.86	0.86	0.86	ug/L
1,2,4-Trichlorobenzene	<1.14	1.14	1.14	ug/L
Naphthalene	<1.53	1.53	1.53	ug/L
1,2,3-Trichlorobenzene	<1.3	1.3	1.3	ug/L
Dilution Factor	1			
Analyzed By	Jeff Ruehr			
Analysis Date/Time	8/1/2013 4:47 PM			

**Client:** Special Samples

**Client Sample ID:** TW 24-01

**Lab ID:** 2013-2713

**Collection Date:** 7/31/2013 1:50:00 PM

**Matrix:** Water

Analyses

**Volatile Organics by GCMS**

**EPA 8260C**

**Batch: 13080208 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Dibromofluoromethane (% Recovery)	103	70-130			%
1,2-Dichloroethane-d4 (% Recovery)	99.9	70-130			%
Toluene-d8 (% Recovery)	99.1	70-130			%
4-Bromofluorobenzene (% Recovery)	102	70-130			%
Dichlorodifluoromethane	<1.12	1.12	1.12		ug/L
Chloromethane	<0.58	0.58	0.58		ug/L
Vinyl chloride	<0.82	0.82	0.82		ug/L
Bromomethane	<3.9	3.9	3.90		ug/L
Chloroethane	<2.68	2.68	2.68		ug/L
Trichlorofluoromethane	<0.51	0.51	0.51		ug/L
1,1-Dichloroethene	<0.43	0.43	0.43		ug/L
Acetone	<10.5	10.5	10.5		ug/L
Methylene chloride	<2.5	2.5	2.5		ug/L
Methyl tert-butyl ether	<0.83	0.83	0.83		ug/L
trans-1,2-Dichloroethene	<0.59	0.59	0.59		ug/L
1,1-Dichloroethane	<0.42	0.42	0.42		ug/L
Methyl ethyl ketone	<12.8	12.8	12.8		ug/L
cis-1,2-Dichloroethene	<1.15	1.15	1.15		ug/L
2,2-Dichloropropane	<0.81	0.81	0.81		ug/L
Bromochloromethane	<0.66	0.66	0.66		ug/L
Chloroform	<0.27	0.27	0.27		ug/L
1,1,1-Trichloroethane	<0.46	0.46	0.46		ug/L
1,1-Dichloropropene	<0.59	0.59	0.59		ug/L
Carbon tetrachloride	<0.6	0.6	0.6		ug/L
Benzene	<0.66	0.66	0.66		ug/L
1,2-Dichloroethane	<1.15	1.15	1.15		ug/L
Trichloroethene	<0.6	0.6	0.60		ug/L
1,2-Dichloropropane	<0.98	0.98	0.98		ug/L
Dibromomethane	<1.78	1.78	1.78		ug/L
Bromodichloromethane	<0.65	0.65	0.65		ug/L
cis-1,3-Dichloropropene	<0.86	0.86	0.86		ug/L
Methyl isobutyl ketone	<8.1	8.1	8.10		ug/L

Toluene	7.58	0.57	0.57	ug/L
trans-1,3-Dichloropropene	<0.84	0.84	0.84	ug/L
1,1,2-Trichloroethane	<0.78	0.78	0.78	ug/L
2-Hexanone	<9.5	9.5	9.5	ug/L
Tetrachloroethene	<0.96	0.96	0.96	ug/L
1,3-Dichloropropane	<0.94	0.94	0.94	ug/L
Dibromochloromethane	<1.25	1.25	1.25	ug/L
1,2-Dibromoethane (EDB)	<0.68	0.68	0.68	ug/L
Chlorobenzene	<0.62	0.62	0.62	ug/L
Ethylbenzene	<0.51	0.51	0.51	ug/L
1,1,1,2-Tetrachloroethane	<0.57	0.57	0.57	ug/L
m,p-Xylene	<1.2	1.2	1.2	ug/L
o-Xylene	<0.5	0.5	0.5	ug/L
Styrene	<0.53	0.53	0.53	ug/L
Bromoform	<1.56	1.56	1.56	ug/L
Isopropylbenzene	<0.59	0.59	0.59	ug/L
1,1,1,2,2-Tetrachloroethane	<0.39	0.39	0.39	ug/L
1,2,3-Trichloropropane	<1.83	1.83	1.83	ug/L
n-Propylbenzene	<0.49	0.49	0.49	ug/L
Bromobenzene	<0.5	0.5	0.5	ug/L
1,3,5-Trimethylbenzene	<0.3	0.3	0.30	ug/L
2-Chlorotoluene	<0.66	0.66	0.66	ug/L
4-Chlorotoluene	<0.8	0.8	0.80	ug/L
tert-Butylbenzene	<0.85	0.85	0.85	ug/L
1,2,4-Trimethylbenzene	<0.46	0.46	0.46	ug/L
sec-Butylbenzene	<0.63	0.63	0.63	ug/L
p-Isopropyltoluene	<0.59	0.59	0.59	ug/L
1,3-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,4-Dichlorobenzene	<0.53	0.53	0.53	ug/L
n-Butylbenzene	<0.72	0.72	0.72	ug/L
1,2-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,2-Dibromo-3-chloropropane	<0.86	0.86	0.86	ug/L
1,2,4-Trichlorobenzene	<1.14	1.14	1.14	ug/L
Naphthalene	<1.53	1.53	1.53	ug/L
1,2,3-Trichlorobenzene	<1.3	1.3	1.3	ug/L
Dilution Factor	1			
Analyzed By	Jeff Ruehr			
Analysis Date/Time	8/1/2013 5:12 PM			

**Client:** Special Samples

**Client Sample ID:** TW 24-02

**Lab ID:** 2013-2714

**Collection Date:** 7/31/2013 3:30:00 PM

**Matrix:** Water

Analyses

**Volatile Organics by GCMS**

**EPA 8260C**

**Batch: 13080208 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Dibromofluoromethane (% Recovery)	102	70-130			%
1,2-Dichloroethane-d4 (% Recovery)	97.6	70-130			%
Toluene-d8 (% Recovery)	99.7	70-130			%
4-Bromofluorobenzene (% Recovery)	107	70-130			%
Dichlorodifluoromethane	<1.12	1.12	1.12		ug/L
Chloromethane	<0.58	0.58	0.58		ug/L
Vinyl chloride	<0.82	0.82	0.82		ug/L
Bromomethane	<3.9	3.9	3.90		ug/L
Chloroethane	<2.68	2.68	2.68		ug/L
Trichlorofluoromethane	<0.51	0.51	0.51		ug/L
1,1-Dichloroethene	<0.43	0.43	0.43		ug/L
Acetone	<10.5	10.5	10.5		ug/L
Methylene chloride	<2.5	2.5	2.5		ug/L
Methyl tert-butyl ether	<0.83	0.83	0.83		ug/L
trans-1,2-Dichloroethene	<0.59	0.59	0.59		ug/L
1,1-Dichloroethane	<0.42	0.42	0.42		ug/L
Methyl ethyl ketone	<12.8	12.8	12.8		ug/L
cis-1,2-Dichloroethene	<1.15	1.15	1.15		ug/L
2,2-Dichloropropane	<0.81	0.81	0.81		ug/L
Bromochloromethane	<0.66	0.66	0.66		ug/L
Chloroform	<0.27	0.27	0.27		ug/L
1,1,1-Trichloroethane	<0.46	0.46	0.46		ug/L
1,1-Dichloropropene	<0.59	0.59	0.59		ug/L
Carbon tetrachloride	<0.6	0.6	0.6		ug/L
Benzene	<0.66	0.66	0.66		ug/L
1,2-Dichloroethane	<1.15	1.15	1.15		ug/L
Trichloroethene	<0.6	0.6	0.60		ug/L
1,2-Dichloropropane	<0.98	0.98	0.98		ug/L
Dibromomethane	<1.78	1.78	1.78		ug/L
Bromodichloromethane	<0.65	0.65	0.65		ug/L
cis-1,3-Dichloropropene	<0.86	0.86	0.86		ug/L
Methyl isobutyl ketone	<8.1	8.1	8.10		ug/L

Toluene	<0.57	0.57	0.57	ug/L
trans-1,3-Dichloropropene	<0.84	0.84	0.84	ug/L
1,1,2-Trichloroethane	<0.78	0.78	0.78	ug/L
2-Hexanone	<9.5	9.5	9.5	ug/L
Tetrachloroethene	<0.96	0.96	0.96	ug/L
1,3-Dichloropropane	<0.94	0.94	0.94	ug/L
Dibromochloromethane	<1.25	1.25	1.25	ug/L
1,2-Dibromoethane (EDB)	<0.68	0.68	0.68	ug/L
Chlorobenzene	<0.62	0.62	0.62	ug/L
Ethylbenzene	<0.51	0.51	0.51	ug/L
1,1,1,2-Tetrachloroethane	<0.57	0.57	0.57	ug/L
m,p-Xylene	<1.2	1.2	1.2	ug/L
o-Xylene	<0.5	0.5	0.5	ug/L
Styrene	<0.53	0.53	0.53	ug/L
Bromoform	<1.56	1.56	1.56	ug/L
Isopropylbenzene	<0.59	0.59	0.59	ug/L
1,1,1,2,2-Tetrachloroethane	<0.39	0.39	0.39	ug/L
1,2,3-Trichloropropane	<1.83	1.83	1.83	ug/L
n-Propylbenzene	<0.49	0.49	0.49	ug/L
Bromobenzene	<0.5	0.5	0.5	ug/L
1,3,5-Trimethylbenzene	<0.3	0.3	0.30	ug/L
2-Chlorotoluene	<0.66	0.66	0.66	ug/L
4-Chlorotoluene	<0.8	0.8	0.80	ug/L
tert-Butylbenzene	<0.85	0.85	0.85	ug/L
1,2,4-Trimethylbenzene	<0.46	0.46	0.46	ug/L
sec-Butylbenzene	<0.63	0.63	0.63	ug/L
p-Isopropyltoluene	<0.59	0.59	0.59	ug/L
1,3-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,4-Dichlorobenzene	<0.53	0.53	0.53	ug/L
n-Butylbenzene	<0.72	0.72	0.72	ug/L
1,2-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,2-Dibromo-3-chloropropane	<0.86	0.86	0.86	ug/L
1,2,4-Trichlorobenzene	<1.14	1.14	1.14	ug/L
Naphthalene	<1.53	1.53	1.53	ug/L
1,2,3-Trichlorobenzene	<1.3	1.3	1.3	ug/L
Dilution Factor	1			
Analyzed By	Jeff Ruehr			
Analysis Date/Time	8/1/2013 5:37 PM			

<b>Client:</b> Special Samples	<b>Client Sample ID:</b> TW 24-03 Shallow
<b>Lab ID:</b> 2013-2715	<b>Collection Date:</b> 8/1/2013 9:15:00 AM
<b>Matrix:</b> Water	

Analyses

**Volatile Organics by GCMS**

**EPA 8260C**

**Batch: 13080208 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Dibromofluoromethane (% Recovery)	100	70-130			%
1,2-Dichloroethane-d4 (% Recovery)	96.9	70-130			%
Toluene-d8 (% Recovery)	92.6	70-130			%
4-Bromofluorobenzene (% Recovery)	102	70-130			%
Dichlorodifluoromethane	<1.12	1.12	1.12		ug/L
Chloromethane	<0.58	0.58	0.58		ug/L
Vinyl chloride	<0.82	0.82	0.82		ug/L
Bromomethane	<3.9	3.9	3.90		ug/L
Chloroethane	<2.68	2.68	2.68		ug/L
Trichlorofluoromethane	<0.51	0.51	0.51		ug/L
1,1-Dichloroethene	<0.43	0.43	0.43		ug/L
Acetone	<10.5	10.5	10.5		ug/L
Methylene chloride	<2.5	2.5	2.5		ug/L
Methyl tert-butyl ether	<0.83	0.83	0.83		ug/L
trans-1,2-Dichloroethene	<0.59	0.59	0.59		ug/L
1,1-Dichloroethane	<0.42	0.42	0.42		ug/L
Methyl ethyl ketone	<12.8	12.8	12.8		ug/L
cis-1,2-Dichloroethene	<1.15	1.15	1.15		ug/L
2,2-Dichloropropane	<0.81	0.81	0.81		ug/L
Bromochloromethane	<0.66	0.66	0.66		ug/L
Chloroform	<0.27	0.27	0.27		ug/L
1,1,1-Trichloroethane	<0.46	0.46	0.46		ug/L
1,1-Dichloropropene	<0.59	0.59	0.59		ug/L
Carbon tetrachloride	<0.6	0.6	0.6		ug/L
Benzene	<0.66	0.66	0.66		ug/L
1,2-Dichloroethane	<1.15	1.15	1.15		ug/L
Trichloroethene	<0.6	0.6	0.60		ug/L
1,2-Dichloropropane	<0.98	0.98	0.98		ug/L
Dibromomethane	<1.78	1.78	1.78		ug/L
Bromodichloromethane	<0.65	0.65	0.65		ug/L
cis-1,3-Dichloropropene	<0.86	0.86	0.86		ug/L
Methyl isobutyl ketone	<8.1	8.1	8.10		ug/L

Toluene	<0.57	0.57	0.57	ug/L
trans-1,3-Dichloropropene	<0.84	0.84	0.84	ug/L
1,1,2-Trichloroethane	<0.78	0.78	0.78	ug/L
2-Hexanone	<9.5	9.5	9.5	ug/L
Tetrachloroethene	<0.96	0.96	0.96	ug/L
1,3-Dichloropropane	<0.94	0.94	0.94	ug/L
Dibromochloromethane	<1.25	1.25	1.25	ug/L
1,2-Dibromoethane (EDB)	<0.68	0.68	0.68	ug/L
Chlorobenzene	<0.62	0.62	0.62	ug/L
Ethylbenzene	<0.51	0.51	0.51	ug/L
1,1,1,2-Tetrachloroethane	<0.57	0.57	0.57	ug/L
m,p-Xylene	<1.2	1.2	1.2	ug/L
o-Xylene	<0.5	0.5	0.5	ug/L
Styrene	<0.53	0.53	0.53	ug/L
Bromoform	<1.56	1.56	1.56	ug/L
Isopropylbenzene	<0.59	0.59	0.59	ug/L
1,1,1,2,2-Tetrachloroethane	<0.39	0.39	0.39	ug/L
1,2,3-Trichloropropane	<1.83	1.83	1.83	ug/L
n-Propylbenzene	<0.49	0.49	0.49	ug/L
Bromobenzene	<0.5	0.5	0.5	ug/L
1,3,5-Trimethylbenzene	<0.3	0.3	0.30	ug/L
2-Chlorotoluene	<0.66	0.66	0.66	ug/L
4-Chlorotoluene	<0.8	0.8	0.80	ug/L
tert-Butylbenzene	<0.85	0.85	0.85	ug/L
1,2,4-Trimethylbenzene	<0.46	0.46	0.46	ug/L
sec-Butylbenzene	<0.63	0.63	0.63	ug/L
p-Isopropyltoluene	<0.59	0.59	0.59	ug/L
1,3-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,4-Dichlorobenzene	<0.53	0.53	0.53	ug/L
n-Butylbenzene	<0.72	0.72	0.72	ug/L
1,2-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,2-Dibromo-3-chloropropane	<0.86	0.86	0.86	ug/L
1,2,4-Trichlorobenzene	<1.14	1.14	1.14	ug/L
Naphthalene	<1.53	1.53	1.53	ug/L
1,2,3-Trichlorobenzene	<1.3	1.3	1.3	ug/L
Dilution Factor	1			
Analyzed By	Jeff Ruehr			
Analysis Date/Time	8/1/2013 6:02 PM			

**Client:** Special Samples

**Client Sample ID:** TW 24-03 Deep

**Lab ID:** 2013-2716

**Collection Date:** 8/1/2013 9:25:00 AM

**Matrix:** Water

Analyses

**Volatile Organics by GCMS**

**EPA 8260C**

**Batch: 13080208 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
<i>Dibromofluoromethane (% Recovery)</i>	99.3	70-130			%
<i>1,2-Dichloroethane-d4 (% Recovery)</i>	95.2	70-130			%
<i>Toluene-d8 (% Recovery)</i>	96.3	70-130			%
<i>4-Bromofluorobenzene (% Recovery)</i>	104	70-130			%
Dichlorodifluoromethane	<1.12	1.12	1.12		ug/L
Chloromethane	<0.58	0.58	0.58		ug/L
Vinyl chloride	<0.82	0.82	0.82		ug/L
Bromomethane	<3.9	3.9	3.90		ug/L
Chloroethane	<2.68	2.68	2.68		ug/L
Trichlorofluoromethane	<0.51	0.51	0.51		ug/L
1,1-Dichloroethene	<0.43	0.43	0.43		ug/L
Acetone	<10.5	10.5	10.5		ug/L
Methylene chloride	<2.5	2.5	2.5		ug/L
Methyl tert-butyl ether	<0.83	0.83	0.83		ug/L
trans-1,2-Dichloroethene	<0.59	0.59	0.59		ug/L
1,1-Dichloroethane	<0.42	0.42	0.42		ug/L
Methyl ethyl ketone	<12.8	12.8	12.8		ug/L
cis-1,2-Dichloroethene	<1.15	1.15	1.15		ug/L
2,2-Dichloropropane	<0.81	0.81	0.81		ug/L
Bromochloromethane	<0.66	0.66	0.66		ug/L
Chloroform	<0.27	0.27	0.27		ug/L
1,1,1-Trichloroethane	<0.46	0.46	0.46		ug/L
1,1-Dichloropropene	<0.59	0.59	0.59		ug/L
Carbon tetrachloride	<0.6	0.6	0.6		ug/L
Benzene	<0.66	0.66	0.66		ug/L
1,2-Dichloroethane	<1.15	1.15	1.15		ug/L
Trichloroethene	<0.6	0.6	0.60		ug/L
1,2-Dichloropropane	<0.98	0.98	0.98		ug/L
Dibromomethane	<1.78	1.78	1.78		ug/L
Bromodichloromethane	<0.65	0.65	0.65		ug/L
cis-1,3-Dichloropropene	<0.86	0.86	0.86		ug/L
Methyl isobutyl ketone	<8.1	8.1	8.10		ug/L



Toluene	<0.57	0.57	0.57	ug/L
trans-1,3-Dichloropropene	<0.84	0.84	0.84	ug/L
1,1,2-Trichloroethane	<0.78	0.78	0.78	ug/L
2-Hexanone	<9.5	9.5	9.5	ug/L
Tetrachloroethene	<0.96	0.96	0.96	ug/L
1,3-Dichloropropane	<0.94	0.94	0.94	ug/L
Dibromochloromethane	<1.25	1.25	1.25	ug/L
1,2-Dibromoethane (EDB)	<0.68	0.68	0.68	ug/L
Chlorobenzene	<0.62	0.62	0.62	ug/L
Ethylbenzene	<0.51	0.51	0.51	ug/L
1,1,1,2-Tetrachloroethane	<0.57	0.57	0.57	ug/L
m,p-Xylene	<1.2	1.2	1.2	ug/L
o-Xylene	<0.5	0.5	0.5	ug/L
Styrene	<0.53	0.53	0.53	ug/L
Bromoform	<1.56	1.56	1.56	ug/L
Isopropylbenzene	<0.59	0.59	0.59	ug/L
1,1,1,2,2-Tetrachloroethane	<0.39	0.39	0.39	ug/L
1,2,3-Trichloropropane	<1.83	1.83	1.83	ug/L
n-Propylbenzene	<0.49	0.49	0.49	ug/L
Bromobenzene	<0.5	0.5	0.5	ug/L
1,3,5-Trimethylbenzene	<0.3	0.3	0.30	ug/L
2-Chlorotoluene	<0.66	0.66	0.66	ug/L
4-Chlorotoluene	<0.8	0.8	0.80	ug/L
tert-Butylbenzene	<0.85	0.85	0.85	ug/L
1,2,4-Trimethylbenzene	<0.46	0.46	0.46	ug/L
sec-Butylbenzene	<0.63	0.63	0.63	ug/L
p-Isopropyltoluene	<0.59	0.59	0.59	ug/L
1,3-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,4-Dichlorobenzene	<0.53	0.53	0.53	ug/L
n-Butylbenzene	<0.72	0.72	0.72	ug/L
1,2-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,2-Dibromo-3-chloropropane	<0.86	0.86	0.86	ug/L
1,2,4-Trichlorobenzene	<1.14	1.14	1.14	ug/L
Naphthalene	<1.53	1.53	1.53	ug/L
1,2,3-Trichlorobenzene	<1.3	1.3	1.3	ug/L
Dilution Factor	1			
Analyzed By	Jeff Ruehr			
Analysis Date/Time	8/1/2013 6:27 PM			

**Client:** Special Samples

**Client Sample ID:** TW 32-01

**Lab ID:** 2013-2717

**Collection Date:** 8/1/2013 10:00:00 AM

**Matrix:** Water

Analyses

**Volatile Organics by GCMS**

**EPA 8260C**

**Batch: 13080208 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
<i>Dibromofluoromethane (% Recovery)</i>	102	70-130			%
<i>1,2-Dichloroethane-d4 (% Recovery)</i>	95.5	70-130			%
<i>Toluene-d8 (% Recovery)</i>	99.0	70-130			%
<i>4-Bromofluorobenzene (% Recovery)</i>	105	70-130			%
Dichlorodifluoromethane	<1.12	1.12	1.12		ug/L
Chloromethane	<0.58	0.58	0.58		ug/L
Vinyl chloride	<0.82	0.82	0.82		ug/L
Bromomethane	<3.9	3.9	3.90		ug/L
Chloroethane	<2.68	2.68	2.68		ug/L
Trichlorofluoromethane	<0.51	0.51	0.51		ug/L
1,1-Dichloroethene	<0.43	0.43	0.43		ug/L
Acetone	<10.5	10.5	10.5		ug/L
Methylene chloride	<2.5	2.5	2.5		ug/L
Methyl tert-butyl ether	<0.83	0.83	0.83		ug/L
trans-1,2-Dichloroethene	<0.59	0.59	0.59		ug/L
1,1-Dichloroethane	<0.42	0.42	0.42		ug/L
Methyl ethyl ketone	<12.8	12.8	12.8		ug/L
cis-1,2-Dichloroethene	<1.15	1.15	1.15		ug/L
2,2-Dichloropropane	<0.81	0.81	0.81		ug/L
Bromochloromethane	<0.66	0.66	0.66		ug/L
Chloroform	<0.27	0.27	0.27		ug/L
1,1,1-Trichloroethane	<0.46	0.46	0.46		ug/L
1,1-Dichloropropene	<0.59	0.59	0.59		ug/L
Carbon tetrachloride	<0.6	0.6	0.6		ug/L
Benzene	<0.66	0.66	0.66		ug/L
1,2-Dichloroethane	<1.15	1.15	1.15		ug/L
Trichloroethene	<0.6	0.6	0.60		ug/L
1,2-Dichloropropane	<0.98	0.98	0.98		ug/L
Dibromomethane	<1.78	1.78	1.78		ug/L
Bromodichloromethane	<0.65	0.65	0.65		ug/L
cis-1,3-Dichloropropene	<0.86	0.86	0.86		ug/L
Methyl isobutyl ketone	<8.1	8.1	8.10		ug/L

Toluene	<0.57	0.57	0.57	ug/L
trans-1,3-Dichloropropene	<0.84	0.84	0.84	ug/L
1,1,2-Trichloroethane	<0.78	0.78	0.78	ug/L
2-Hexanone	<9.5	9.5	9.5	ug/L
Tetrachloroethene	<0.96	0.96	0.96	ug/L
1,3-Dichloropropane	<0.94	0.94	0.94	ug/L
Dibromochloromethane	<1.25	1.25	1.25	ug/L
1,2-Dibromoethane (EDB)	<0.68	0.68	0.68	ug/L
Chlorobenzene	<0.62	0.62	0.62	ug/L
Ethylbenzene	<0.51	0.51	0.51	ug/L
1,1,1,2-Tetrachloroethane	<0.57	0.57	0.57	ug/L
m,p-Xylene	<1.2	1.2	1.2	ug/L
o-Xylene	<0.5	0.5	0.5	ug/L
Styrene	<0.53	0.53	0.53	ug/L
Bromoform	<1.56	1.56	1.56	ug/L
Isopropylbenzene	<0.59	0.59	0.59	ug/L
1,1,1,2,2-Tetrachloroethane	<0.39	0.39	0.39	ug/L
1,2,3-Trichloropropane	<1.83	1.83	1.83	ug/L
n-Propylbenzene	<0.49	0.49	0.49	ug/L
Bromobenzene	<0.5	0.5	0.5	ug/L
1,3,5-Trimethylbenzene	<0.3	0.3	0.30	ug/L
2-Chlorotoluene	<0.66	0.66	0.66	ug/L
4-Chlorotoluene	<0.8	0.8	0.80	ug/L
tert-Butylbenzene	<0.85	0.85	0.85	ug/L
1,2,4-Trimethylbenzene	<0.46	0.46	0.46	ug/L
sec-Butylbenzene	<0.63	0.63	0.63	ug/L
p-Isopropyltoluene	<0.59	0.59	0.59	ug/L
1,3-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,4-Dichlorobenzene	<0.53	0.53	0.53	ug/L
n-Butylbenzene	<0.72	0.72	0.72	ug/L
1,2-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,2-Dibromo-3-chloropropane	<0.86	0.86	0.86	ug/L
1,2,4-Trichlorobenzene	<1.14	1.14	1.14	ug/L
Naphthalene	<1.53	1.53	1.53	ug/L
1,2,3-Trichlorobenzene	<1.3	1.3	1.3	ug/L
Dilution Factor	1			
Analyzed By	Jeff Ruehr			
Analysis Date/Time	8/1/2013 6:52 PM			

<b>Client:</b> Special Samples	<b>Client Sample ID:</b> TW 32-02
<b>Lab ID:</b> 2013-2718	<b>Collection Date:</b> 8/1/2013 10:30:00 AM
<b>Matrix:</b> Water	

Analyses

**Volatile Organics by GCMS**

**EPA 8260C**

**Batch: 13080208 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
<i>Dibromofluoromethane (% Recovery)</i>	104	70-130			%
<i>1,2-Dichloroethane-d4 (% Recovery)</i>	100	70-130			%
<i>Toluene-d8 (% Recovery)</i>	104	70-130			%
<i>4-Bromofluorobenzene (% Recovery)</i>	109	70-130			%
Dichlorodifluoromethane	<1.12	1.12	1.12		ug/L
Chloromethane	<0.58	0.58	0.58		ug/L
Vinyl chloride	<0.82	0.82	0.82		ug/L
Bromomethane	<3.9	3.9	3.90		ug/L
Chloroethane	<2.68	2.68	2.68		ug/L
Trichlorofluoromethane	<0.51	0.51	0.51		ug/L
1,1-Dichloroethene	<0.43	0.43	0.43		ug/L
Acetone	<10.5	10.5	10.5		ug/L
Methylene chloride	<2.5	2.5	2.5		ug/L
Methyl tert-butyl ether	<0.83	0.83	0.83		ug/L
trans-1,2-Dichloroethene	<0.59	0.59	0.59		ug/L
1,1-Dichloroethane	<0.42	0.42	0.42		ug/L
Methyl ethyl ketone	<12.8	12.8	12.8		ug/L
cis-1,2-Dichloroethene	<1.15	1.15	1.15		ug/L
2,2-Dichloropropane	<0.81	0.81	0.81		ug/L
Bromochloromethane	<0.66	0.66	0.66		ug/L
Chloroform	<0.27	0.27	0.27		ug/L
1,1,1-Trichloroethane	<0.46	0.46	0.46		ug/L
1,1-Dichloropropene	<0.59	0.59	0.59		ug/L
Carbon tetrachloride	<0.6	0.6	0.6		ug/L
Benzene	<0.66	0.66	0.66		ug/L
1,2-Dichloroethane	<1.15	1.15	1.15		ug/L
Trichloroethene	<0.6	0.6	0.60		ug/L
1,2-Dichloropropane	<0.98	0.98	0.98		ug/L
Dibromomethane	<1.78	1.78	1.78		ug/L
Bromodichloromethane	<0.65	0.65	0.65		ug/L
cis-1,3-Dichloropropene	<0.86	0.86	0.86		ug/L
Methyl isobutyl ketone	<8.1	8.1	8.10		ug/L

Toluene	<0.57	0.57	0.57	ug/L
trans-1,3-Dichloropropene	<0.84	0.84	0.84	ug/L
1,1,2-Trichloroethane	<0.78	0.78	0.78	ug/L
2-Hexanone	<9.5	9.5	9.5	ug/L
Tetrachloroethene	<0.96	0.96	0.96	ug/L
1,3-Dichloropropane	<0.94	0.94	0.94	ug/L
Dibromochloromethane	<1.25	1.25	1.25	ug/L
1,2-Dibromoethane (EDB)	<0.68	0.68	0.68	ug/L
Chlorobenzene	<0.62	0.62	0.62	ug/L
Ethylbenzene	<0.51	0.51	0.51	ug/L
1,1,1,2-Tetrachloroethane	<0.57	0.57	0.57	ug/L
m,p-Xylene	<1.2	1.2	1.2	ug/L
o-Xylene	<0.5	0.5	0.5	ug/L
Styrene	<0.53	0.53	0.53	ug/L
Bromoform	<1.56	1.56	1.56	ug/L
Isopropylbenzene	<0.59	0.59	0.59	ug/L
1,1,1,2,2-Tetrachloroethane	<0.39	0.39	0.39	ug/L
1,2,3-Trichloropropane	<1.83	1.83	1.83	ug/L
n-Propylbenzene	<0.49	0.49	0.49	ug/L
Bromobenzene	<0.5	0.5	0.5	ug/L
1,3,5-Trimethylbenzene	<0.3	0.3	0.30	ug/L
2-Chlorotoluene	<0.66	0.66	0.66	ug/L
4-Chlorotoluene	<0.8	0.8	0.80	ug/L
tert-Butylbenzene	<0.85	0.85	0.85	ug/L
1,2,4-Trimethylbenzene	<0.46	0.46	0.46	ug/L
sec-Butylbenzene	<0.63	0.63	0.63	ug/L
p-Isopropyltoluene	<0.59	0.59	0.59	ug/L
1,3-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,4-Dichlorobenzene	<0.53	0.53	0.53	ug/L
n-Butylbenzene	<0.72	0.72	0.72	ug/L
1,2-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,2-Dibromo-3-chloropropane	<0.86	0.86	0.86	ug/L
1,2,4-Trichlorobenzene	<1.14	1.14	1.14	ug/L
Naphthalene	<1.53	1.53	1.53	ug/L
1,2,3-Trichlorobenzene	<1.3	1.3	1.3	ug/L
Dilution Factor	1			
Analyzed By	Jeff Ruehr			
Analysis Date/Time	8/1/2013 7:17 PM			

**Client:** Special Samples

**Client Sample ID:** Trip Blank

**Lab ID:** 2013-2719

**Collection Date:** 8/29/2013 12:20:00 PM

**Matrix:** Water

Analyses

**Volatile Organics by GCMS**

**EPA 8260C**

**Batch: 13080208 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Dibromofluoromethane (% Recovery)	106	70-130			%
1,2-Dichloroethane-d4 (% Recovery)	102	70-130			%
Toluene-d8 (% Recovery)	98.6	70-130			%
4-Bromofluorobenzene (% Recovery)	104	70-130			%
Dichlorodifluoromethane	<1.12	1.12	1.12		ug/L
Chloromethane	<0.58	0.58	0.58		ug/L
Vinyl chloride	<0.82	0.82	0.82		ug/L
Bromomethane	<3.9	3.9	3.90		ug/L
Chloroethane	<2.68	2.68	2.68		ug/L
Trichlorofluoromethane	<0.51	0.51	0.51		ug/L
1,1-Dichloroethene	<0.43	0.43	0.43		ug/L
Acetone	<10.5	10.5	10.5		ug/L
Methylene chloride	<2.5	2.5	2.5		ug/L
Methyl tert-butyl ether	<0.83	0.83	0.83		ug/L
trans-1,2-Dichloroethene	<0.59	0.59	0.59		ug/L
1,1-Dichloroethane	<0.42	0.42	0.42		ug/L
Methyl ethyl ketone	<12.8	12.8	12.8		ug/L
cis-1,2-Dichloroethene	<1.15	1.15	1.15		ug/L
2,2-Dichloropropane	<0.81	0.81	0.81		ug/L
Bromochloromethane	<0.66	0.66	0.66		ug/L
Chloroform	<0.27	0.27	0.27		ug/L
1,1,1-Trichloroethane	<0.46	0.46	0.46		ug/L
1,1-Dichloropropene	<0.59	0.59	0.59		ug/L
Carbon tetrachloride	<0.6	0.6	0.6		ug/L
Benzene	<0.66	0.66	0.66		ug/L
1,2-Dichloroethane	<1.15	1.15	1.15		ug/L
Trichloroethene	<0.6	0.6	0.60		ug/L
1,2-Dichloropropane	<0.98	0.98	0.98		ug/L
Dibromomethane	<1.78	1.78	1.78		ug/L
Bromodichloromethane	<0.65	0.65	0.65		ug/L
cis-1,3-Dichloropropene	<0.86	0.86	0.86		ug/L
Methyl isobutyl ketone	<8.1	8.1	8.10		ug/L

Toluene	<0.57	0.57	0.57	ug/L
trans-1,3-Dichloropropene	<0.84	0.84	0.84	ug/L
1,1,2-Trichloroethane	<0.78	0.78	0.78	ug/L
2-Hexanone	<9.5	9.5	9.5	ug/L
Tetrachloroethene	<0.96	0.96	0.96	ug/L
1,3-Dichloropropane	<0.94	0.94	0.94	ug/L
Dibromochloromethane	<1.25	1.25	1.25	ug/L
1,2-Dibromoethane (EDB)	<0.68	0.68	0.68	ug/L
Chlorobenzene	<0.62	0.62	0.62	ug/L
Ethylbenzene	<0.51	0.51	0.51	ug/L
1,1,1,2-Tetrachloroethane	<0.57	0.57	0.57	ug/L
m,p-Xylene	<1.2	1.2	1.2	ug/L
o-Xylene	<0.5	0.5	0.5	ug/L
Styrene	0.968	0.53	0.53	ug/L
Bromoform	<1.56	1.56	1.56	ug/L
Isopropylbenzene	<0.59	0.59	0.59	ug/L
1,1,1,2,2-Tetrachloroethane	<0.39	0.39	0.39	ug/L
1,2,3-Trichloropropane	<1.83	1.83	1.83	ug/L
n-Propylbenzene	<0.49	0.49	0.49	ug/L
Bromobenzene	<0.5	0.5	0.5	ug/L
1,3,5-Trimethylbenzene	<0.3	0.3	0.30	ug/L
2-Chlorotoluene	<0.66	0.66	0.66	ug/L
4-Chlorotoluene	<0.8	0.8	0.80	ug/L
tert-Butylbenzene	<0.85	0.85	0.85	ug/L
1,2,4-Trimethylbenzene	<0.46	0.46	0.46	ug/L
sec-Butylbenzene	<0.63	0.63	0.63	ug/L
p-Isopropyltoluene	<0.59	0.59	0.59	ug/L
1,3-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,4-Dichlorobenzene	<0.53	0.53	0.53	ug/L
n-Butylbenzene	<0.72	0.72	0.72	ug/L
1,2-Dichlorobenzene	<0.7	0.7	0.70	ug/L
1,2-Dibromo-3-chloropropane	<0.86	0.86	0.86	ug/L
1,2,4-Trichlorobenzene	<1.14	1.14	1.14	ug/L
Naphthalene	<1.53	1.53	1.53	ug/L
1,2,3-Trichlorobenzene	<1.3	1.3	1.3	ug/L
Dilution Factor	1			
Analyzed By	Jeff Ruehr			
Analysis Date/Time	8/1/2013 3:06 PM			

**Client:** Special Samples

**Client Sample ID:** TW 36-02

**Lab ID:** 2013-2712

**Collection Date:** 7/31/2013 11:20:00 AM

**Matrix:** Water

Analyses

**Semi-Volatiles by GC/MS**

**EPA 3510C/EPA 8270D**

**Batch: 13080502 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
2-Fluorophenol (% Recovery)	17.9	40-110			%
Nitrobenzene-d5 (% Recovery)	54.7	50-110			%
2-Fluorobiphenyl (% Recovery)	39.7	50-110			%
2,4,6-Tribromophenol (% Recovery)	27.9	40-110			%
Terphenyl-d14 (% Recovery)	62.2	50-110			%
Methyl Methanesulfonate	<0.2	0.2	100		ug/L
Ethyl methanesulfonate	<0.2	0.2	100		ug/L
Phenol	<0.2	0.2	100		ug/L
Aniline	<0.2	0.2	100		ug/L
Bis(2-chloroethyl)ether	<0.2	0.2	100		ug/L
2-Chlorophenol	<0.2	0.2	100		ug/L
1,3-Dichlorobenzene	<0.12	0.12	60		ug/L
1,4-Dichlorobenzene	<0.12	0.12	60		ug/L
Benzyl alcohol	<0.16	0.16	80		ug/L
1,2-Dichlorobenzene	<0.12	0.12	60		ug/L
2-Methylphenol	<0.1	0.1	50		ug/L
Acetophenone	0.411	0.1	50		ug/L
4-Methylphenol	0.199	0.1	50		ug/L
N-Nitrosodi-n-propylamine	<0.2	0.2	100		ug/L
Hexachloroethane	<0.2	0.2	100		ug/L
Nitrobenzene	<0.2	0.2	100		ug/L
N-Nitrosopiperidine	<0.2	0.2	100		ug/L
Isophorone	<0.1	0.1	50		ug/L
2-Nitrophenol	<0.3	0.3	150		ug/L
2,4-Dimethylphenol	<0.1	0.1	50		ug/L
Bis(2-chloroethoxy)methane	<0.2	0.2	100		ug/L
2,4-Dichlorophenol	<0.2	0.2	100		ug/L
1,2,4-Trichlorobenzene	<0.12	0.12	60		ug/L
Naphthalene	0.216	0.08	40		ug/L
4-Chloroaniline	<0.1	0.1	50		ug/L
2,6-Dichlorophenol	<0.2	0.2	100		ug/L
Hexachlorobutadiene	<0.2	0.2	100		ug/L



N-Nitrosodibutylamine	<0.2	0.2	100	ug/L
4-Chloro-3-methylphenol	<0.16	0.16	80	ug/L
2-Methylnaphthalene	0.107	0.1	50	ug/L
1,2,4,5-Tetrachlorobenzene	<0.1	0.1	50	ug/L
Hexachlorocyclopentadiene	<0.16	0.16	80	ug/L
2,4,6-Trichlorophenol	<0.2	0.2	100	ug/L
2,4,5-Trichlorophenol	<0.2	0.2	100	ug/L
2-Chloronaphthalene	<0.1	0.1	50	ug/L
1-Chloronaphthalene	<0.1	0.1	50	ug/L
2-Nitroaniline	<0.2	0.2	100	ug/L
Dimethyl phthalate	<0.2	0.2	100	ug/L
2,6-Dinitrotoluene	<0.2	0.2	100	ug/L
Acenaphthylene	<0.08	0.08	40	ug/L
3-Nitroaniline	<0.2	0.2	100	ug/L
Acenaphthene	<0.1	0.1	50	ug/L
2,4-Dinitrophenol	<4	4	2000	ug/L
Pentachlorobenzene	<0.12	0.12	60	ug/L
4-Nitrophenol	<2	2	1000	ug/L
Dibenzofuran	<0.1	0.1	50	ug/L
2,4-Dinitrotoluene	<0.2	0.2	100	ug/L
2,3,4,6-Tetrachlorophenol	<0.6	0.6	300	ug/L
Diethyl phthalate	<0.2	0.2	100	ug/L
Fluorene	<0.1	0.1	50	ug/L
4-Chlorophenyl phenyl ether	<0.1	0.1	50	ug/L
4-Nitroaniline	<0.2	0.2	100	ug/L
4,6-Dinitro-2-methylphenol	<6	6	3000	ug/L
Diphenylamine	<0.1	0.1	50	ug/L
Azobenzene	<0.08	0.08	40	ug/L
4-Bromophenyl phenyl ether	<0.2	0.2	100	ug/L
Hexachlorobenzene	<0.16	0.16	80	ug/L
Pentachlorophenol	<1	1	500	ug/L
Pentachloronitrobenzene	<0.2	0.2	100	ug/L
Pronamide	<0.2	0.2	100	ug/L
Phenanthrene	<0.08	0.08	40	ug/L
Anthracene	<0.08	0.08	40	ug/L
Carbazole	<0.1	0.1	50	ug/L
Di-n-butyl phthalate	<0.2	0.2	100	ug/L
Fluoranthene	<0.08	0.08	40	ug/L
Pyrene	<0.08	0.08	40	ug/L
Dimethylaminoazobenzene	<0.2	0.2	100	ug/L

Arkansas Department of Environmental Quality  
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Laboratory Contact: Jeff Ruehr  
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501-682-0955

Butyl benzyl phthalate	<0.3	0.3	150	ug/L
Benzo (a) anthracene	<0.1	0.1	50	ug/L
Chrysene	<0.1	0.1	50	ug/L
Bis(2-ethylhexyl)phthalate	<0.3	0.3	150	ug/L
Di-n-octyl phthalate	<0.3	0.3	150	ug/L
Benzo (b) fluoranthene	<0.16	0.16	80	ug/L
7,12-Dimethylbenz (a) anthracene	<0.2	0.2	100	ug/L
Benzo (k) fluoranthene	<0.16	0.16	80	ug/L
Benzo (a) pyrene	<0.16	0.16	80	ug/L
3-Methylcholanthrene	<0.2	0.2	100	ug/L
Indeno (1,2,3-cd) pyrene	<0.2	0.2	100	ug/L
Dibenzo (a,h) anthracene	<0.16	0.16	80	ug/L
Benzo (g,h,i) perylene	<0.16	0.16	80	ug/L
Initial Volume	500			mL
Final Volume	1			mL
Dilution Factor	1			
Analyzed By	Ed Harris			
Analysis Date/Time	8/5/2013 2:35 PM			
Prep By	Ed Harris			
Prep Date/Time	8/2/2013 08:00			

**Client:** Special Samples

**Client Sample ID:** TW 24-01

**Lab ID:** 2013-2713

**Collection Date:** 7/31/2013 1:50:00 PM

**Matrix:** Water

Analyses

**Semi-Volatiles by GC/MS**

**EPA 3510C/EPA 8270D**

**Batch: 13080502 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
2-Fluorophenol (% Recovery)	15.0	40-110			%
Nitrobenzene-d5 (% Recovery)	48.6	50-110			%
2-Fluorobiphenyl (% Recovery)	45.1	50-110			%
2,4,6-Tribromophenol (% Recovery)	37.9	40-110			%
Terphenyl-d14 (% Recovery)	71.9	50-110			%
Methyl Methanesulfonate	<0.2	0.2	100		ug/L
Ethyl methanesulfonate	<0.2	0.2	100		ug/L
Phenol	<0.2	0.2	100		ug/L
Aniline	<0.2	0.2	100		ug/L
Bis(2-chloroethyl)ether	<0.2	0.2	100		ug/L
2-Chlorophenol	<0.2	0.2	100		ug/L
1,3-Dichlorobenzene	<0.12	0.12	60		ug/L
1,4-Dichlorobenzene	<0.12	0.12	60		ug/L
Benzyl alcohol	<0.16	0.16	80		ug/L
1,2-Dichlorobenzene	<0.12	0.12	60		ug/L
2-Methylphenol	<0.1	0.1	50		ug/L
Acetophenone	<0.1	0.1	50		ug/L
4-Methylphenol	<0.1	0.1	50		ug/L
N-Nitrosodi-n-propylamine	<0.2	0.2	100		ug/L
Hexachloroethane	<0.2	0.2	100		ug/L
Nitrobenzene	<0.2	0.2	100		ug/L
N-Nitrosopiperidine	<0.2	0.2	100		ug/L
Isophorone	<0.1	0.1	50		ug/L
2-Nitrophenol	<0.3	0.3	150		ug/L
2,4-Dimethylphenol	<0.1	0.1	50		ug/L
Bis(2-chloroethoxy)methane	<0.2	0.2	100		ug/L
2,4-Dichlorophenol	<0.2	0.2	100		ug/L
1,2,4-Trichlorobenzene	<0.12	0.12	60		ug/L
Naphthalene	<0.08	0.08	40		ug/L
4-Chloroaniline	<0.1	0.1	50		ug/L
2,6-Dichlorophenol	<0.2	0.2	100		ug/L
Hexachlorobutadiene	<0.2	0.2	100		ug/L

N-Nitrosodibutylamine	<0.2	0.2	100	ug/L
4-Chloro-3-methylphenol	<0.16	0.16	80	ug/L
2-Methylnaphthalene	<0.1	0.1	50	ug/L
1,2,4,5-Tetrachlorobenzene	<0.1	0.1	50	ug/L
Hexachlorocyclopentadiene	<0.16	0.16	80	ug/L
2,4,6-Trichlorophenol	<0.2	0.2	100	ug/L
2,4,5-Trichlorophenol	<0.2	0.2	100	ug/L
2-Chloronaphthalene	<0.1	0.1	50	ug/L
1-Chloronaphthalene	<0.1	0.1	50	ug/L
2-Nitroaniline	<0.2	0.2	100	ug/L
Dimethyl phthalate	<0.2	0.2	100	ug/L
2,6-Dinitrotoluene	<0.2	0.2	100	ug/L
Acenaphthylene	<0.08	0.08	40	ug/L
3-Nitroaniline	<0.2	0.2	100	ug/L
Acenaphthene	<0.1	0.1	50	ug/L
2,4-Dinitrophenol	<4	4	2000	ug/L
Pentachlorobenzene	<0.12	0.12	60	ug/L
4-Nitrophenol	<2	2	1000	ug/L
Dibenzofuran	<0.1	0.1	50	ug/L
2,4-Dinitrotoluene	<0.2	0.2	100	ug/L
2,3,4,6-Tetrachlorophenol	<0.6	0.6	300	ug/L
Diethyl phthalate	<0.2	0.2	100	ug/L
Fluorene	<0.1	0.1	50	ug/L
4-Chlorophenyl phenyl ether	<0.1	0.1	50	ug/L
4-Nitroaniline	<0.2	0.2	100	ug/L
4,6-Dinitro-2-methylphenol	<6	6	3000	ug/L
Diphenylamine	<0.1	0.1	50	ug/L
Azobenzene	<0.08	0.08	40	ug/L
4-Bromophenyl phenyl ether	<0.2	0.2	100	ug/L
Hexachlorobenzene	<0.16	0.16	80	ug/L
Pentachlorophenol	<1	1	500	ug/L
Pentachloronitrobenzene	<0.2	0.2	100	ug/L
Pronamide	<0.2	0.2	100	ug/L
Phenanthrene	<0.08	0.08	40	ug/L
Anthracene	<0.08	0.08	40	ug/L
Carbazole	<0.1	0.1	50	ug/L
Di-n-butyl phthalate	<0.2	0.2	100	ug/L
Fluoranthene	<0.08	0.08	40	ug/L
Pyrene	<0.08	0.08	40	ug/L
Dimethylaminoazobenzene	<0.2	0.2	100	ug/L

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Butyl benzyl phthalate	<0.3	0.3	150	ug/L
Benzo (a) anthracene	<0.1	0.1	50	ug/L
Chrysene	<0.1	0.1	50	ug/L
Bis(2-ethylhexyl)phthalate	<0.3	0.3	150	ug/L
Di-n-octyl phthalate	<0.3	0.3	150	ug/L
Benzo (b) fluoranthene	<0.16	0.16	80	ug/L
7,12-Dimethylbenz (a) anthracene	<0.2	0.2	100	ug/L
Benzo (k) fluoranthene	<0.16	0.16	80	ug/L
Benzo (a) pyrene	<0.16	0.16	80	ug/L
3-Methylcholanthrene	<0.2	0.2	100	ug/L
Indeno (1,2,3-cd) pyrene	<0.2	0.2	100	ug/L
Dibenzo (a,h) anthracene	<0.16	0.16	80	ug/L
Benzo (g,h,i) perylene	<0.16	0.16	80	ug/L
Initial Volume	500			mL
Final Volume	1			mL
Dilution Factor	1			
Analyzed By	Ed Harris			
Analysis Date/Time	8/5/2013 3:04 PM			
Prep By	Ed Harris			
Prep Date/Time	8/2/2013 08:00			

**Client:** Special Samples

**Client Sample ID:** TW 44-01

**Lab ID:** 2013-2709

**Collection Date:** 7/31/2013 9:45:00 AM

**Matrix:** Water

Analyses

**Total Metals by EPA 200.8**

**EPA 200.8**

**Batch: 13080602 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	<4000	4000	20		ug/L
Antimony	<2000	2000	5		ug/L
Arsenic	<200	200	0.5		ug/L
Barium	<2000	2000	2.0		ug/L
Beryllium	<100	100	0.1		ug/L
Boron	<5000	5000	5.0		ug/L
Cadmium	<200	200	0.3		ug/L
Calcium	321	8	0.04		mg/L
Chromium	<200	200	0.3		ug/L
Cobalt	<200	200	0.5		ug/L
Copper	<200	200	0.5		ug/L
Iron	<4000	4000	10.0		ug/L
Lead	<200	200	0.1		ug/L
Magnesium	680	20	0.1		mg/L
Manganese	1540	200	0.2		ug/L
Nickel	<500	500	0.5		ug/L
Potassium	<200	200	0.05		mg/L
Selenium	<400	400	0.5		ug/L
Silver	<1000	1000	1.0		ug/L
Sodium	1150	8	0.02		mg/L
Thallium	<500	500	0.05		ug/L
Vanadium	<500	500	1.0		ug/L
Zinc	<600	600	2.0		ug/L
Dilution Factor	200				
Analyzed By	Robert Graddy				
Analysis Date/Time	Aug 5 2013 2:30PM				
Prep By					
Prep Date/Time					

**Client:** Special Samples

**Client Sample ID:** TW 44-02

**Lab ID:** 2013-2710

**Collection Date:** 7/31/2013 10:15:00 AM

**Matrix:** Water

Analyses

**Total Metals by EPA 200.8**

**EPA 200.8**

**Batch: 13080602 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	32800	4000	20		ug/L
Antimony	<2000	2000	5		ug/L
Arsenic	<200	200	0.5		ug/L
Barium	<2000	2000	2.0		ug/L
Beryllium	<100	100	0.1		ug/L
Boron	<5000	5000	5.0		ug/L
Cadmium	<200	200	0.3		ug/L
Calcium	<8	8	0.04		mg/L
Chromium	<200	200	0.3		ug/L
Cobalt	<200	200	0.5		ug/L
Copper	<200	200	0.5		ug/L
Iron	26700	4000	10.0		ug/L
Lead	<200	200	0.1		ug/L
Magnesium	<20	20	0.1		mg/L
Manganese	904	200	0.2		ug/L
Nickel	<500	500	0.5		ug/L
Potassium	<200	200	0.05		mg/L
Selenium	<400	400	0.5		ug/L
Silver	<1000	1000	1.0		ug/L
Sodium	39.3	8	0.02		mg/L
Thallium	<500	500	0.05		ug/L
Vanadium	<500	500	1.0		ug/L
Zinc	<600	600	2.0		ug/L

Dilution Factor 200

Analyzed By Robert Graddy

Analysis Date/Time Aug 5 2013 2:36PM

Prep By

Prep Date/Time

<b>Client:</b> Special Samples	<b>Client Sample ID:</b> TW 36-02
<b>Lab ID:</b> 2013-2712	<b>Collection Date:</b> 7/31/2013 11:20:00 AM
<b>Matrix:</b> Water	

Analyses

<i>Dissolved Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 13080601 Run: 1</i>			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	<400	400	20		ug/L
Antimony	<100	100	1.0		ug/L
Arsenic	<10	10	0.2		ug/L
Barium	<40	40	0.4		ug/L
Beryllium	<2	2	0.04		ug/L
Boron	<100	100	2.0		ug/L
Cadmium	<2	2	0.05		ug/L
Calcium	6.19	0.6	0.03		mg/L
Chromium	<10	10	0.05		ug/L
Cobalt	21.4	10	0.05		ug/L
Copper	<10	10	0.2		ug/L
Iron	6600	400	5.0		ug/L
Lead	<6	6	0.02		ug/L
Magnesium	1.95	0.4	0.01		mg/L
Manganese	1570	6	0.07		ug/L
Nickel	<10	10	0.15		ug/L
Potassium	3.46	0.4	0.01		mg/L
Selenium	<20	20	0.2		ug/L
Silicon Dioxide	12.4	1	0.01		mg/L
Silver	<10	10	0.02		ug/L
Sodium	13.6	0.4	0.01		mg/L
Thallium	<10	10	0.005		ug/L
Vanadium	<10	10	0.3		ug/L
Zinc	<20	20	0.3		ug/L
Hardness	23.5	20	1.0		mg/L
Dilution Factor	20				
Analyzed By	Robert Graddy				
Analysis Date/Time	Aug 5 2013 3:30PM				

<i>Total Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 13080602 Run: 1</i>			
	<u>Result</u>	<u>Reporting</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>



		<u>Limit</u>		
Aluminum	11000	400	20	ug/L
Antimony	<200	200	5	ug/L
Arsenic	<20	20	0.5	ug/L
Barium	<200	200	2.0	ug/L
Beryllium	<10	10	0.1	ug/L
Boron	<500	500	5.0	ug/L
Cadmium	<20	20	0.3	ug/L
Calcium	9.05	0.8	0.04	mg/L
Chromium	<20	20	0.3	ug/L
Cobalt	27.2	20	0.5	ug/L
Copper	<20	20	0.5	ug/L
Iron	15900	400	10.0	ug/L
Lead	<20	20	0.1	ug/L
Magnesium	3.39	2	0.1	mg/L
Manganese	2060	20	0.2	ug/L
Nickel	<50	50	0.5	ug/L
Potassium	<20	20	0.05	mg/L
Selenium	<40	40	0.5	ug/L
Silver	<100	100	1.0	ug/L
Sodium	16.9	0.8	0.02	mg/L
Thallium	<50	50	0.05	ug/L
Vanadium	<50	50	1.0	ug/L
Zinc	60.6	60	2.0	ug/L
Dilution Factor	20			
Analyzed By	Robert Graddy			
Analysis Date/Time	Aug 5 2013 3:49PM			
Prep By				
Prep Date/Time				

<b>Client:</b> Special Samples	<b>Client Sample ID:</b> TW 24-01
<b>Lab ID:</b> 2013-2713	<b>Collection Date:</b> 7/31/2013 1:50:00 PM
<b>Matrix:</b> Water	

Analyses

<i>Dissolved Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 13080601 Run: 1</i>			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	<400	400	20		ug/L
Antimony	<100	100	1.0		ug/L
Arsenic	<10	10	0.2		ug/L
Barium	<40	40	0.4		ug/L
Beryllium	<2	2	0.04		ug/L
Boron	<100	100	2.0		ug/L
Cadmium	<2	2	0.05		ug/L
Calcium	7.81	0.6	0.03		mg/L
Chromium	<10	10	0.05		ug/L
Cobalt	<10	10	0.05		ug/L
Copper	<10	10	0.2		ug/L
Iron	<400	400	5.0		ug/L
Lead	<6	6	0.02		ug/L
Magnesium	1.41	0.4	0.01		mg/L
Manganese	351	6	0.07		ug/L
Nickel	<10	10	0.15		ug/L
Potassium	1.48	0.4	0.01		mg/L
Selenium	<20	20	0.2		ug/L
Silicon Dioxide	7.79	1	0.01		mg/L
Silver	<10	10	0.02		ug/L
Sodium	2.22	0.4	0.01		mg/L
Thallium	<10	10	0.005		ug/L
Vanadium	<10	10	0.3		ug/L
Zinc	<20	20	0.3		ug/L
Hardness	25.3	20	1.0		mg/L
Dilution Factor	20				
Analyzed By	Robert Graddy				
Analysis Date/Time	Aug 5 2013 3:36PM				

<i>Total Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 13080602 Run: 1</i>			
	<u>Result</u>	<u>Reporting</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>

		<u>Limit</u>		
Aluminum	6990	400	20	ug/L
Antimony	<200	200	5	ug/L
Arsenic	<20	20	0.5	ug/L
Barium	<200	200	2.0	ug/L
Beryllium	<10	10	0.1	ug/L
Boron	<500	500	5.0	ug/L
Cadmium	<20	20	0.3	ug/L
Calcium	9.06	0.8	0.04	mg/L
Chromium	<20	20	0.3	ug/L
Cobalt	<20	20	0.5	ug/L
Copper	<20	20	0.5	ug/L
Iron	5810	400	10.0	ug/L
Lead	<20	20	0.1	ug/L
Magnesium	2.14	2	0.1	mg/L
Manganese	403	20	0.2	ug/L
Nickel	<50	50	0.5	ug/L
Potassium	<20	20	0.05	mg/L
Selenium	<40	40	0.5	ug/L
Silver	<100	100	1.0	ug/L
Sodium	2.52	0.8	0.02	mg/L
Thallium	<50	50	0.05	ug/L
Vanadium	<50	50	1.0	ug/L
Zinc	<60	60	2.0	ug/L
Dilution Factor	20			
Analyzed By	Robert Graddy			
Analysis Date/Time	Aug 5 2013 3:55PM			
Prep By				
Prep Date/Time				

**Client:** Special Samples

**Client Sample ID:** TW 24-02

**Lab ID:** 2013-2714

**Collection Date:** 7/31/2013 3:30:00 PM

**Matrix:** Water

Analyses

**Dissolved Metals by EPA 200.8**

**EPA 200.8**

**Batch: 13080601 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	<400	400	20		ug/L
Antimony	<100	100	1.0		ug/L
Arsenic	<10	10	0.2		ug/L
Barium	41	40	0.4		ug/L
Beryllium	<2	2	0.04		ug/L
Boron	<100	100	2.0		ug/L
Cadmium	<2	2	0.05		ug/L
Calcium	14.2	0.6	0.03		mg/L
Chromium	<10	10	0.05		ug/L
Cobalt	20.4	10	0.05		ug/L
Copper	<10	10	0.2		ug/L
Iron	15900	400	5.0		ug/L
Lead	<6	6	0.02		ug/L
Magnesium	3.41	0.4	0.01		mg/L
Manganese	2500	6	0.07		ug/L
Nickel	<10	10	0.15		ug/L
Potassium	1.31	0.4	0.01		mg/L
Selenium	<20	20	0.2		ug/L
Silicon Dioxide	14.4	1	0.01		mg/L
Silver	<10	10	0.02		ug/L
Sodium	25.0	0.4	0.01		mg/L
Thallium	<10	10	0.005		ug/L
Vanadium	<10	10	0.3		ug/L
Zinc	<20	20	0.3		ug/L
Hardness	49.5	20	1.0		mg/L
Dilution Factor	20				
Analyzed By	Robert Graddy				
Analysis Date/Time	Aug 5 2013 3:42PM				

**Total Metals by EPA 200.8**

**EPA 200.8**

**Batch: 13080602 Run: 1**

Result      Reporting      MDL      Qual      Unit

		<u>Limit</u>		
Aluminum	699	400	20	ug/L
Antimony	<200	200	5	ug/L
Arsenic	<20	20	0.5	ug/L
Barium	<200	200	2.0	ug/L
Beryllium	<10	10	0.1	ug/L
Boron	<500	500	5.0	ug/L
Cadmium	<20	20	0.3	ug/L
Calcium	15.8	0.8	0.04	mg/L
Chromium	<20	20	0.3	ug/L
Cobalt	21.7	20	0.5	ug/L
Copper	<20	20	0.5	ug/L
Iron	21100	400	10.0	ug/L
Lead	<20	20	0.1	ug/L
Magnesium	2.92	2	0.1	mg/L
Manganese	3020	20	0.2	ug/L
Nickel	<50	50	0.5	ug/L
Potassium	<20	20	0.05	mg/L
Selenium	<40	40	0.5	ug/L
Silver	<100	100	1.0	ug/L
Sodium	21.8	0.8	0.02	mg/L
Thallium	<50	50	0.05	ug/L
Vanadium	<50	50	1.0	ug/L
Zinc	<60	60	2.0	ug/L
Dilution Factor	20			
Analyzed By	Robert Graddy			
Analysis Date/Time	Aug 5 2013 4:01PM			
Prep By				
Prep Date/Time				

**Client:** Special Samples

**Client Sample ID:** TW 24-03 Shallow

**Lab ID:** 2013-2715

**Collection Date:** 8/1/2013 9:15:00 AM

**Matrix:** Water

Analyses

**Total Metals by EPA 200.8**

**EPA 200.8**

**Batch: 13080602 Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	67000	400	20		ug/L
Antimony	<200	200	5		ug/L
Arsenic	<20	20	0.5		ug/L
Barium	405	200	2.0		ug/L
Beryllium	<10	10	0.1		ug/L
Boron	<500	500	5.0		ug/L
Cadmium	<20	20	0.3		ug/L
Calcium	8.47	0.8	0.04		mg/L
Chromium	84.1	20	0.3		ug/L
Cobalt	43.2	20	0.5		ug/L
Copper	56.1	20	0.5		ug/L
Iron	47700	400	10.0		ug/L
Lead	82.5	20	0.1		ug/L
Magnesium	8.46	2	0.1		mg/L
Manganese	763	20	0.2		ug/L
Nickel	59.7	50	0.5		ug/L
Potassium	<20	20	0.05		mg/L
Selenium	<40	40	0.5		ug/L
Silver	<100	100	1.0		ug/L
Sodium	29.4	0.8	0.02		mg/L
Thallium	<50	50	0.05		ug/L
Vanadium	<50	50	1.0		ug/L
Zinc	154	60	2.0		ug/L
Dilution Factor	20				
Analyzed By	Robert Graddy				
Analysis Date/Time	Aug 5 2013 4:08PM				
Prep By					
Prep Date/Time					

**Client:** Special Samples      **Client Sample ID:** TW 24-03 Deep  
**Lab ID:** 2013-2716      **Collection Date:** 8/1/2013 9:25:00 AM  
**Matrix:** Water

Analyses

<i>Dissolved Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 13080601 Run: 1</i>			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	<400	400	20		ug/L
Antimony	<100	100	1.0		ug/L
Arsenic	<10	10	0.2		ug/L
Barium	<40	40	0.4		ug/L
Beryllium	<2	2	0.04		ug/L
Boron	<100	100	2.0		ug/L
Cadmium	<2	2	0.05		ug/L
Calcium	6.22	0.6	0.03		mg/L
Chromium	<10	10	0.05		ug/L
Cobalt	18.6	10	0.05		ug/L
Copper	<10	10	0.2		ug/L
Iron	<400	400	5.0		ug/L
Lead	<6	6	0.02		ug/L
Magnesium	8.39	0.4	0.01		mg/L
Manganese	132	6	0.07		ug/L
Nickel	<10	10	0.15		ug/L
Potassium	<0.4	0.4	0.01		mg/L
Selenium	<20	20	0.2		ug/L
Silicon Dioxide	7.74	1	0.01		mg/L
Silver	<10	10	0.02		ug/L
Sodium	35.6	0.4	0.01		mg/L
Thallium	<10	10	0.005		ug/L
Vanadium	<10	10	0.3		ug/L
Zinc	<20	20	0.3		ug/L
Hardness	50.1	20	1.0		mg/L
Dilution Factor	20				
Analyzed By	Robert Graddy				
Analysis Date/Time	Aug 5 2013 1:33PM				

<i>Total Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 13080602 Run: 1</i>			
	<u>Result</u>	<u>Reporting</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>

		<u>Limit</u>		
Aluminum	14500	400	20	ug/L
Antimony	<200	200	5	ug/L
Arsenic	<20	20	0.5	ug/L
Barium	<200	200	2.0	ug/L
Beryllium	<10	10	0.1	ug/L
Boron	<500	500	5.0	ug/L
Cadmium	<20	20	0.3	ug/L
Calcium	36.6	0.8	0.04	mg/L
Chromium	<20	20	0.3	ug/L
Cobalt	65.4	20	0.5	ug/L
Copper	<20	20	0.5	ug/L
Iron	12600	400	10.0	ug/L
Lead	<20	20	0.1	ug/L
Magnesium	43.7	2	0.1	mg/L
Manganese	475	20	0.2	ug/L
Nickel	<50	50	0.5	ug/L
Potassium	<20	20	0.05	mg/L
Selenium	<40	40	0.5	ug/L
Silver	<100	100	1.0	ug/L
Sodium	207	0.8	0.02	mg/L
Thallium	<50	50	0.05	ug/L
Vanadium	<50	50	1.0	ug/L
Zinc	<60	60	2.0	ug/L
Dilution Factor	20			
Analyzed By	Robert Graddy			
Analysis Date/Time	Aug 5 2013 4:14PM			
Prep By				
Prep Date/Time				



## Analytical Quality Control Results Report

<b>Batch: 13080502</b>	<b>Semi-VOA water (Prep)</b>
<b>MB</b>	<b>LIMS ID: 13080502-MB-01</b>

**Semi Volatiles - water MB**

**Run: 1**

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Initial Volume	500 mL				
Final Volume	1 mL				
Prep By	Ed Harris				
Prep Date/Time	8/2/2013 08:00				
2-Fluorophenol (% Recovery)	34.3 %			40 - 110	
Nitrobenzene-d5 (% Recovery)	74.5 %			40 - 125	
2-Fluorobiphenyl (% Recovery)	69.6 %			40 - 125	
2,4,6-Tribromophenol (% Recovery)	62.6 %			40 - 125	
Terphenyl-d14 (% Recovery)	76.2 %			40 - 125	
Methyl Methanesulfonate	<0.2 ug/L	0.2	0.2		
Ethyl methanesulfonate	<0.2 ug/L	0.2	0.2		
Phenol	<0.2 ug/L	0.2	0.2		
Aniline	<0.2 ug/L	0.2	0.2		
Bis(2-chloroethyl)ether	<0.2 ug/L	0.2	0.2		
2-Chlorophenol	<0.2 ug/L	0.2	0.2		
1,3-Dichlorobenzene	<0.12 ug/L	0.12	0.12		
1,4-Dichlorobenzene	<0.12 ug/L	0.12	0.12		
Benzyl alcohol	<0.16 ug/L	0.16	0.16		
1,2-Dichlorobenzene	<0.12 ug/L	0.12	0.12		
2-Methylphenol	<0.1 ug/L	0.1	0.1		
Acetophenone	<0.1 ug/L	0.1	0.1		
4-Methylphenol	<0.1 ug/L	0.1	0.1		
N-Nitrosodi-n-propylamine	<0.2 ug/L	0.2	0.2		
Hexachloroethane	<0.2 ug/L	0.2	0.2		
Nitrobenzene	<0.2 ug/L	0.2	0.2		
N-Nitrosopiperidine	<0.2 ug/L	0.2	0.2		
Isophorone	<0.1 ug/L	0.1	0.1		
2-Nitrophenol	<0.3 ug/L	0.3	0.3		
2,4-Dimethylphenol	<0.1 ug/L	0.1	0.1		
Bis(2-chloroethoxy)methane	<0.2 ug/L	0.2	0.2		
2,4-Dichlorophenol	<0.2 ug/L	0.2	0.2		

1,2,4-Trichlorobenzene	<0.12 ug/L	0.12	0.12
Naphthalene	<0.08 ug/L	0.08	0.08
4-Chloroaniline	<0.1 ug/L	0.1	0.1
2,6-Dichlorophenol	<0.2 ug/L	0.2	0.2
Hexachlorobutadiene	<0.2 ug/L	0.2	0.2
N-Nitrosodibutylamine	<0.2 ug/L	0.2	0.2
4-Chloro-3-methylphenol	<0.16 ug/L	0.16	0.16
2-Methylnaphthalene	<0.12 ug/L	0.12	0.12
1,2,4,5-Tetrachlorobenzene	<0.1 ug/L	0.1	0.1
Hexachlorocyclopentadiene	<0.16 ug/L	0.16	0.16
2,4,6-Trichlorophenol	<0.2 ug/L	0.2	0.2
2,4,5-Trichlorophenol	<0.2 ug/L	0.2	0.2
2-Chloronaphthalene	<0.1 ug/L	0.1	0.1
1-Chloronaphthalene	<0.1 ug/L	0.1	0.1
2-Nitroaniline	<0.2 ug/L	0.2	0.2
Dimethyl phthalate	<0.2 ug/L	0.2	0.2
2,6-Dinitrotoluene	<0.2 ug/L	0.2	0.2
Acenaphthylene	<0.08 ug/L	0.08	0.08
3-Nitroaniline	<0.2 ug/L	0.2	0.2
Acenaphthene	<0.1 ug/L	0.1	0.1
2,4-Dinitrophenol	<4 ug/L	4	4
Pentachlorobenzene	<0.12 ug/L	0.12	0.12
4-Nitrophenol	<2 ug/L	2	2
Dibenzofuran	<0.1 ug/L	0.1	0.1
2,4-Dinitrotoluene	<0.2 ug/L	0.2	0.2
2,3,4,6-Tetrachlorophenol	<0.6 ug/L	0.6	0.6
Diethyl phthalate	<0.2 ug/L	0.2	0.2
Fluorene	<0.1 ug/L	0.1	0.1
4-Chlorophenyl phenyl ether	<0.1 ug/L	0.1	0.1
4-Nitroaniline	<0.2 ug/L	0.2	0.2
4,6-Dinitro-2-methylphenol	<6 ug/L	6	6
Diphenylamine	<0.1 ug/L	0.1	0.1
Azobenzene	<0.08 ug/L	0.08	0.08
4-Bromophenyl phenyl ether	<0.2 ug/L	0.2	0.2
Hexachlorobenzene	<0.16 ug/L	0.16	0.16
Pentachlorophenol	<1 ug/L	1	1
Pentachloronitrobenzene	<0.2 ug/L	0.2	0.2
Pronamide	<0.2 ug/L	0.2	0.2
Phenanthrene	<0.08 ug/L	0.08	0.08
Anthracene	<0.08 ug/L	0.08	0.08

Carbazole	<0.1 ug/L	0.1	0.1
Di-n-butyl phthalate	1.35 ug/L	0.2	0.2
Fluoranthene	<0.08 ug/L	0.08	0.08
Pyrene	<0.08 ug/L	0.08	0.08
Dimethylaminoazobenzene	<0.2 ug/L	0.2	0.2
Butyl benzyl phthalate	<0.3 ug/L	0.3	0.3
Benzo (a) anthracene	<0.2 ug/L	0.2	0.2
Chrysene	<0.1 ug/L	0.1	0.1
Bis(2-ethylhexyl)phthalate	<0.3 ug/L	0.3	0.3
Di-n-octyl phthalate	<0.3 ug/L	0.3	0.3
Benzo (b) fluoranthene	<0.16 ug/L	0.16	0.16
7,12-Dimethylbenz (a) anthracene	<0.2 ug/L	0.2	0.2
Benzo (k) fluoranthene	<0.16 ug/L	0.16	0.16
Benzo (a) pyrene	<0.16 ug/L	0.16	0.16
3-Methylcholanthrene	<0.2 ug/L	0.2	0.2
Indeno (1,2,3-cd) pyrene	<0.2 ug/L	0.2	0.2
Dibenzo (a,h) anthracene	<0.16 ug/L	0.16	0.16
Benzo (g,h,i) perylene	<0.16 ug/L	0.16	0.16
Dilution Factor	1		
Analyzed By	Ed Harris		
Analysis Date/Time	8/5/2013 12:10		

<b>LCS</b>	<b>LIMS ID: 13080502-LCS-01</b>
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**Semi Volatiles - water LCS**

**Run: 1**

<b>Parameter</b>	<b>Result</b>	<b>DL</b>	<b>RL</b>	<b>Accuracy Control</b>	<b>Precision Control</b>
Initial Volume	500 mL				
Final Volume	1 mL				
Prep By	Ed Harris				
Prep Date/Time	8/2/2013 08:00				
2-Fluorophenol (% Recovery)	35.0 %			40 - 110	
Nitrobenzene-d5 (% Recovery)	71.1 %			50 - 125	
2-Fluorobiphenyl (% Recovery)	63.2 %			50 - 125	
2,4,6-Tribromophenol (% Recovery)	74.6 %			40 - 125	
Terphenyl-d14 (% Recovery)	78.4 %			50 - 125	
Methyl Methanesulfonate (% Recovery)	55.6 %			50 - 150	
Ethyl methanesulfonate (% Recovery)	58.7 %			50 - 150	
Phenol (% Recovery)	29.1 %			50 - 150	
Aniline (% Recovery)	53.2 %			50 - 150	
Bis(2-chloroethyl)ether (% Recovery)	77.2 %			50 - 150	

2-Chlorophenol (% Recovery)	71.6 %	50 - 150
1,3-Dichlorobenzene (% Recovery)	51.2 %	50 - 150
1,4-Dichlorobenzene (% Recovery)	50.3 %	50 - 150
Benzyl alcohol (% Recovery)	72.0 %	50 - 150
1,2-Dichlorobenzene (% Recovery)	52.3 %	50 - 150
2-Methylphenol (% Recovery)	65.1 %	50 - 150
Acetophenone (% Recovery)	80.4 %	50 - 150
4-Methylphenol (% Recovery)	58.1 %	50 - 150
N-Nitrosodi-n-propylamine (% Recovery)	80.9 %	50 - 150
Hexachloroethane (% Recovery)	42.6 %	50 - 150
Nitrobenzene (% Recovery)	74.5 %	50 - 150
N-Nitrosopiperidine (% Recovery)	86.0 %	50 - 150
Isophorone (% Recovery)	78.6 %	50 - 150
2-Nitrophenol (% Recovery)	74.1 %	50 - 150
2,4-Dimethylphenol (% Recovery)	7.0 %	50 - 150
Bis(2-chloroethoxy)methane (% Recovery)	71.9 %	50 - 150
2,4-Dichlorophenol (% Recovery)	74.9 %	50 - 150
1,2,4-Trichlorobenzene (% Recovery)	51.3 %	50 - 150
Naphthalene (% Recovery)	68.9 %	50 - 150
4-Chloroaniline (% Recovery)	68.4 %	50 - 150
2,6-Dichlorophenol (% Recovery)	76.3 %	50 - 150
Hexachlorobutadiene (% Recovery)	40.7 %	50 - 150
N-Nitrosodibutylamine (% Recovery)	84.2 %	50 - 150
4-Chloro-3-methylphenol (% Recovery)	78.5 %	50 - 150
2-Methylnaphthalene (% Recovery)	69.2 %	50 - 150
1,2,4,5-Tetrachlorobenzene (% Recovery)	59.3 %	50 - 150
Hexachlorocyclopentadiene (% Recovery)	59.2 %	50 - 150
2,4,6-Trichlorophenol (% Recovery)	82.9 %	50 - 150
2,4,5-Trichlorophenol (% Recovery)	82.4 %	50 - 150
2-Chloronaphthalene (% Recovery)	75.0 %	50 - 150
1-Chloronaphthalene (% Recovery)	74.0 %	50 - 150
2-Nitroaniline (% Recovery)	87.4 %	50 - 150
Dimethyl phthalate (% Recovery)	78.4 %	50 - 150
2,6-Dinitrotoluene (% Recovery)	83.6 %	50 - 150
Acenaphthylene (% Recovery)	78.5 %	50 - 150
3-Nitroaniline (% Recovery)	88.6 %	50 - 150
Acenaphthene (% Recovery)	74.8 %	50 - 150
2,4-Dinitrophenol (% Recovery)	91.0 %	50 - 150
Pentachlorobenzene (% Recovery)	62.5 %	50 - 150
4-Nitrophenol (% Recovery)	33.3 %	50 - 150

Dibenzofuran (% Recovery)	78.6 %	50 - 150
2,4-Dinitrotoluene (% Recovery)	79.6 %	50 - 150
2,3,4,6-Tetrachlorophenol (% Recovery)	81.2 %	50 - 150
Diethyl phthalate (% Recovery)	87.0 %	50 - 150
Fluorene (% Recovery)	75.5 %	50 - 150
4-Chlorophenyl phenyl ether (% Recovery)	78.2 %	50 - 150
4-Nitroaniline (% Recovery)	95.8 %	50 - 150
4,6-Dinitro-2-methylphenol (% Recovery)	83.9 %	50 - 150
Diphenylamine (% Recovery)	77.4 %	50 - 150
Azobenzene (% Recovery)	75.2 %	50 - 150
4-Bromophenyl phenyl ether (% Recovery)	72.2 %	50 - 150
Hexachlorobenzene (% Recovery)	64.6 %	50 - 150
Pentachlorophenol (% Recovery)	81.4 %	50 - 150
Pentachloronitrobenzene (% Recovery)	76.7 %	50 - 150
Pronamide (% Recovery)	85.4 %	50 - 150
Phenanthrene (% Recovery)	74.2 %	50 - 150
Anthracene (% Recovery)	76.2 %	50 - 150
Carbazole (% Recovery)	89.9 %	50 - 150
Di-n-butyl phthalate (% Recovery)	132 %	50 - 150
Fluoranthene (% Recovery)	78.0 %	50 - 150
Pyrene (% Recovery)	80.0 %	50 - 150
Dimethylaminoazobenzene (% Recovery)	88.2 %	50 - 150
Butyl benzyl phthalate (% Recovery)	85.5 %	50 - 150
Benzo (a) anthracene (% Recovery)	82.5 %	50 - 150
Chrysene (% Recovery)	85.0 %	50 - 150
Bis(2-ethylhexyl)phthalate (% Recovery)	77.4 %	50 - 150
Di-n-octyl phthalate (% Recovery)	75.7 %	50 - 150
Benzo (b) fluoranthene (% Recovery)	81.4 %	50 - 150
7,12-Dimethylbenz (a) anthracene (% Recovery)	79.1 %	50 - 150
Benzo (k) fluoranthene (% Recovery)	86.3 %	50 - 150
Benzo (a) pyrene (% Recovery)	85.3 %	50 - 150
3-Methylcholanthrene (% Recovery)	83.3 %	50 - 150
Indeno (1,2,3-cd) pyrene (% Recovery)	81.2 %	50 - 150
Dibenzo (a,h) anthracene (% Recovery)	84.6 %	50 - 150
Benzo (g,h,i) perylene (% Recovery)	81.1 %	50 - 150
Dilution Factor	1	
Analyzed By	Ed Harris	
Analysis Date/Time	8/5/2013 12:39	

## Analytical Quality Control Results Report

<b>Batch: 13080208</b>	<b>VOA - water</b>
<b>TW 32-02</b>	<b>LIMS ID: 2013-2718</b>

*Volatiles - water DUP*

*Run: 1*

<i>Parameter</i>	<i>Result</i>	<i>DL</i>	<i>RL</i>	<i>Accuracy Control</i>	<i>Precision Control</i>
Dibromofluoromethane (% Recovery)	107 %			70 - 130	
1,2-Dichloroethane-d4 (% Recovery)	103 %			70 - 130	
Toluene-d8 (% Recovery)	101 %			70 - 130	
4-Bromofluorobenzene (% Recovery)	109 %			70 - 130	
Dichlorodifluoromethane	<1.12 ug/L	1.12	1.12		
Dichlorodifluoromethane (RPD)	0 %				0 - 20
Chloromethane (RPD)	0 %				0 - 20
Chloromethane	<0.58 ug/L	0.58	0.58		
Vinyl chloride	<0.82 ug/L	0.82	0.82		
Vinyl chloride (RPD)	0 %				0 - 20
Bromomethane (RPD)	0 %				0 - 20
Bromomethane	<3.9 ug/L	3.9	3.9		
Chloroethane	<2.68 ug/L	2.68	2.68		
Chloroethane (RPD)	<b>200 %</b>				<b>0 - 20</b>
Trichlorofluoromethane (RPD)	0 %				0 - 20
Trichlorofluoromethane	<0.51 ug/L	0.51	0.51		
1,1-Dichloroethene	<0.43 ug/L	0.43	0.43		
1,1-Dichloroethene (RPD)	0 %				0 - 20
Acetone (RPD)	<b>200 %</b>				<b>0 - 20</b>
Acetone	<10.5 ug/L	10.5	10.5		
Methylene chloride	<2.5 ug/L	2.5	2.5		
Methylene chloride (RPD)	6.3 %				0 - 20
Methyl tert-butyl ether (RPD)	0 %				0 - 20
Methyl tert-butyl ether	<0.83 ug/L	0.83	0.83		
trans-1,2-Dichloroethene	<0.59 ug/L	0.59	0.59		
trans-1,2-Dichloroethene (RPD)	0 %				0 - 20
1,1-Dichloroethane (RPD)	0 %				0 - 20
1,1-Dichloroethane	<0.42 ug/L	0.42	0.42		
Methyl ethyl ketone	<12.8 ug/L	12.8	12.8		
Methyl ethyl ketone (RPD)	0 %				0 - 20
cis-1,2-Dichloroethene (RPD)	0 %				0 - 20
cis-1,2-Dichloroethene	<1.15 ug/L	1.15	1.15		
2,2-Dichloropropane	<0.81 ug/L	0.81	0.81		

2,2-Dichloropropane (RPD)	0 %			0 - 20
Bromochloromethane (RPD)	0 %			0 - 20
Bromochloromethane	<0.66 ug/L	0.66	0.66	
Chloroform	<0.27 ug/L	0.27	0.27	
Chloroform (RPD)	0 %			0 - 20
1,1,1-Trichloroethane (RPD)	0 %			0 - 20
1,1,1-Trichloroethane	<0.46 ug/L	0.46	0.46	
1,1-Dichloropropene	<0.59 ug/L	0.59	0.59	
1,1-Dichloropropene (RPD)	0 %			0 - 20
Carbon tetrachloride (RPD)	0 %			0 - 20
Carbon tetrachloride	<0.6 ug/L	0.6	0.6	
Benzene	<0.66 ug/L	0.66	0.66	
Benzene (RPD)	14.4 %			0 - 20
1,2-Dichloroethane (RPD)	0 %			0 - 20
1,2-Dichloroethane	<1.15 ug/L	1.15	1.15	
Trichloroethene	<0.6 ug/L	0.6	0.6	
Trichloroethene (RPD)	0 %			0 - 20
1,2-Dichloropropane (RPD)	0 %			0 - 20
1,2-Dichloropropane	<0.98 ug/L	0.98	0.98	
Dibromomethane	<1.78 ug/L	1.78	1.78	
Dibromomethane (RPD)	0 %			0 - 20
Bromodichloromethane (RPD)	0 %			0 - 20
Bromodichloromethane	<0.65 ug/L	0.65	0.65	
cis-1,3-Dichloropropene	<0.86 ug/L	0.86	0.86	
cis-1,3-Dichloropropene (RPD)	0 %			0 - 20
Methyl isobutyl ketone (RPD)	0 %			0 - 20
Methyl isobutyl ketone	<8.1 ug/L	8.1	8.1	
Toluene	<0.57 ug/L	0.57	0.57	
Toluene (RPD)	0 %			0 - 20
trans-1,3-Dichloropropene (RPD)	0 %			0 - 20
trans-1,3-Dichloropropene	<0.84 ug/L	0.84	0.84	
1,1,2-Trichloroethane	<0.78 ug/L	0.78	0.78	
1,1,2-Trichloroethane (RPD)	0 %			0 - 20
2-Hexanone (RPD)	0 %			0 - 20
2-Hexanone	<9.5 ug/L	9.5	9.5	
Tetrachloroethene	<0.96 ug/L	0.96	0.96	
Tetrachloroethene (RPD)	0 %			0 - 20
1,3-Dichloropropane (RPD)	0 %			0 - 20
1,3-Dichloropropane	<0.94 ug/L	0.94	0.94	
Dibromochloromethane	<1.25 ug/L	1.25	1.25	

Dibromochloromethane (RPD)	0 %			0 - 20
1,2-Dibromoethane (EDB) (RPD)	0 %			0 - 20
1,2-Dibromoethane (EDB)	<0.68 ug/L	0.68	0.68	
Chlorobenzene	<0.62 ug/L	0.62	0.62	
Chlorobenzene (RPD)	0 %			0 - 20
Ethylbenzene	<0.51 ug/L	0.51	0.51	
Ethylbenzene (RPD)	0 %			0 - 20
1,1,1,2-Tetrachloroethane (RPD)	0 %			0 - 20
1,1,1,2-Tetrachloroethane	<0.57 ug/L	0.57	0.57	
m,p-Xylene (RPD)	0 %			0 - 20
m,p-Xylene	<1.2 ug/L	1.2	1.2	
o-Xylene	<0.5 ug/L	0.5	0.5	
o-Xylene (RPD)	0 %			0 - 20
Styrene (RPD)	0 %			0 - 20
Styrene	<0.53 ug/L	0.53	0.53	
Bromoform	<1.56 ug/L	1.56	1.56	
Bromoform (RPD)	0 %			0 - 20
Isopropylbenzene (RPD)	0 %			0 - 20
Isopropylbenzene	<0.59 ug/L	0.59	0.59	
1,1,1,2,2-Tetrachloroethane	<0.39 ug/L	0.39	0.39	
1,1,1,2,2-Tetrachloroethane (RPD)	0 %			0 - 20
1,2,3-Trichloropropane (RPD)	0 %			0 - 20
1,2,3-Trichloropropane	<1.83 ug/L	1.83	1.83	
n-Propylbenzene	<0.49 ug/L	0.49	0.49	
n-Propylbenzene (RPD)	0 %			0 - 20
Bromobenzene (RPD)	0 %			0 - 20
Bromobenzene	<0.5 ug/L	0.5	0.5	
1,3,5-Trimethylbenzene	<0.3 ug/L	0.3	0.3	
1,3,5-Trimethylbenzene (RPD)	0 %			0 - 20
2-Chlorotoluene (RPD)	0 %			0 - 20
2-Chlorotoluene	<0.66 ug/L	0.66	0.66	
4-Chlorotoluene	<0.8 ug/L	0.8	0.8	
4-Chlorotoluene (RPD)	0 %			0 - 20
tert-Butylbenzene (RPD)	0 %			0 - 20
tert-Butylbenzene	<0.85 ug/L	0.85	0.85	
1,2,4-Trimethylbenzene	<0.46 ug/L	0.46	0.46	
1,2,4-Trimethylbenzene (RPD)	0 %			0 - 20
sec-Butylbenzene (RPD)	0 %			0 - 20
sec-Butylbenzene	<0.63 ug/L	0.63	0.63	
p-Isopropyltoluene	<0.59 ug/L	0.59	0.59	



p-Isopropyltoluene (RPD)	0 %			0 - 20
1,3-Dichlorobenzene (RPD)	0 %			0 - 20
1,3-Dichlorobenzene	<0.7 ug/L	0.7	0.7	
1,4-Dichlorobenzene	<0.53 ug/L	0.53	0.53	
1,4-Dichlorobenzene (RPD)	0 %			0 - 20
n-Butylbenzene (RPD)	0 %			0 - 20
n-Butylbenzene	<0.72 ug/L	0.72	0.72	
1,2-Dichlorobenzene	<0.7 ug/L	0.7	0.7	
1,2-Dichlorobenzene (RPD)	0 %			0 - 20
1,2-Dibromo-3-chloropropane (RPD)	0 %			0 - 20
1,2-Dibromo-3-chloropropane	<0.86 ug/L	0.86	0.86	
1,2,4-Trichlorobenzene	<1.14 ug/L	1.14	1.14	
1,2,4-Trichlorobenzene (RPD)	0 %			0 - 20
Naphthalene (RPD)	0 %			0 - 20
Naphthalene	<1.53 ug/L	1.53	1.53	
1,2,3-Trichlorobenzene	<1.3 ug/L	1.3	1.3	
1,2,3-Trichlorobenzene (RPD)	0 %			0 - 20
Dilution Factor	1			
Analyzed By	Jeff Ruehr			
Analysis Date/Time	8/1/2013 7:43 PM			

**LCS** **LIMS ID: 13080208-LCS-01**

**Volatiles - water LCS**

**Run: 1**

<b>Parameter</b>	<b>Result</b>	<b>DL</b>	<b>RL</b>	<b>Accuracy Control</b>	<b>Precision Control</b>
Dibromofluoromethane (% Recovery)	100 %			70 - 130	
1,2-Dichloroethane-d4 (% Recovery)	104 %			70 - 130	
Toluene-d8 (% Recovery)	99.3 %			70 - 130	
4-Bromofluorobenzene (% Recovery)	103 %			70 - 130	
Dichlorodifluoromethane (% Recovery)	91.0 %			60 - 130	
Chloromethane (% Recovery)	94.3 %			60 - 130	
Vinyl chloride (% Recovery)	99.5 %			60 - 130	
Bromomethane (% Recovery)	100 %			60 - 130	
Chloroethane (% Recovery)	99.7 %			60 - 130	
Trichlorofluoromethane (% Recovery)	97.0 %			60 - 130	
1,1-Dichloroethene (% Recovery)	100 %			60 - 130	
Acetone (% Recovery)	108 %			60 - 130	
Methylene chloride (% Recovery)	99.7 %			60 - 130	
Methyl tert-butyl ether (% Recovery)	103 %			60 - 130	
trans-1,2-Dichloroethene (% Recovery)	103 %			60 - 130	

1,1-Dichloroethane (% Recovery)	102 %	60 - 130
Methyl ethyl ketone (% Recovery)	104 %	60 - 130
cis-1,2-Dichloroethene (% Recovery)	99.6 %	60 - 130
2,2-Dichloropropane (% Recovery)	101 %	60 - 130
Bromochloromethane (% Recovery)	103 %	60 - 130
Chloroform (% Recovery)	102 %	60 - 130
1,1,1-Trichloroethane (% Recovery)	98.7 %	60 - 130
1,1-Dichloropropene (% Recovery)	98.1 %	60 - 130
Carbon tetrachloride (% Recovery)	99.8 %	60 - 130
Benzene (% Recovery)	99.9 %	60 - 130
1,2-Dichloroethane (% Recovery)	99.0 %	60 - 130
Trichloroethene (% Recovery)	99.4 %	60 - 130
1,2-Dichloropropane (% Recovery)	98.2 %	60 - 130
Dibromomethane (% Recovery)	94.4 %	60 - 130
Bromodichloromethane (% Recovery)	97.4 %	60 - 130
cis-1,3-Dichloropropene (% Recovery)	96.1 %	60 - 130
Methyl isobutyl ketone (% Recovery)	97.7 %	60 - 130
Toluene (% Recovery)	96.2 %	60 - 130
trans-1,3-Dichloropropene (% Recovery)	95.1 %	60 - 130
1,1,2-Trichloroethane (% Recovery)	96.7 %	60 - 130
2-Hexanone (% Recovery)	106 %	60 - 130
Tetrachloroethene (% Recovery)	89.2 %	60 - 130
1,3-Dichloropropane (% Recovery)	94.8 %	60 - 130
Dibromochloromethane (% Recovery)	96.2 %	60 - 130
1,2-Dibromoethane (EDB) (% Recovery)	95.6 %	60 - 130
Chlorobenzene (% Recovery)	96.6 %	60 - 130
Ethylbenzene (% Recovery)	95.5 %	60 - 130
1,1,1,2-Tetrachloroethane (% Recovery)	96.0 %	60 - 130
m,p-Xylene (% Recovery)	96.0 %	60 - 130
o-Xylene (% Recovery)	95.2 %	60 - 130
Styrene (% Recovery)	96.0 %	60 - 130
Bromoform (% Recovery)	95.2 %	60 - 130
Isopropylbenzene (% Recovery)	101 %	60 - 130
1,1,2,2-Tetrachloroethane (% Recovery)	102 %	60 - 130
1,2,3-Trichloropropane (% Recovery)	100 %	60 - 130
n-Propylbenzene (% Recovery)	97.0 %	60 - 130
Bromobenzene (% Recovery)	101 %	60 - 130
1,3,5-Trimethylbenzene (% Recovery)	100 %	60 - 130
2-Chlorotoluene (% Recovery)	99.7 %	60 - 130
4-Chlorotoluene (% Recovery)	100 %	60 - 130

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tert-Butylbenzene (% Recovery)	101 %	60 - 130
1,2,4-Trimethylbenzene (% Recovery)	99.1 %	60 - 130
sec-Butylbenzene (% Recovery)	101 %	60 - 130
p-Isopropyltoluene (% Recovery)	96.8 %	60 - 130
1,3-Dichlorobenzene (% Recovery)	98.3 %	60 - 130
1,4-Dichlorobenzene (% Recovery)	99.6 %	60 - 130
n-Butylbenzene (% Recovery)	95.7 %	60 - 130
1,2-Dichlorobenzene (% Recovery)	99.5 %	60 - 130
1,2-Dibromo-3-chloropropane (% Recovery)	102 %	60 - 130
1,2,4-Trichlorobenzene (% Recovery)	95.4 %	60 - 130
Naphthalene (% Recovery)	100 %	60 - 130
1,2,3-Trichlorobenzene (% Recovery)	97.6 %	60 - 130
Dilution Factor	1	
Analyzed By	Jeff Ruehr	
Analysis Date/Time	8/1/2013 13:26	