



March 15, 2017

Reference No. 080987

Mr. Daniel J. Eaton
New York State Department of Environmental Conservation
625 Broadway
Albany, New York
U.S.A. 12233-7015

Dear Mr. Eaton:

**Re: Groundwater Monitoring Program
Friedrichsohn Cooperage Site
Town of Waterford, New York**

1. Scope of Work

This letter presents the results of the third groundwater monitoring event conducted by GHD as part of a semi-annual groundwater monitoring program in accordance with the GHD report entitled "Groundwater Monitoring Plan OU-2" (GMP), dated July 2015. Field activities were conducted by GHD on December 5 and 6, 2016, and included maintenance work on the surface well seals at MW-2 and MW-2S, and the groundwater monitoring event, as described below.

The surface seals at monitoring wells MW-2 and MW-2S were inspected by CHA in early September 2016 and were found to be compromised. To correct this condition, GHD arranged for the repair of the well seals on December 5, 2016, which included grouting the space between the 2-inch PCV riser and the concentric 4-inch PVC casing to approximately 6-inches from the ground surface, and then topping it off with sand to ground level; and, installing new J-plugs, road boxes, and lids. This maintenance work was conducted to prevent any potential surface water from the parking lot from entering the wells.

The monitoring wells included in the groundwater monitoring program were as follows:

- Upgradient overburden/interface well MW-2S.
- Upgradient bedrock well MW-2.
- On-Site overburden/interface wells MW-8, MW-10.
- Downgradient overburden/interface wells MW-5S, MW-6S, MW-12S, MW-13S.
- Downgradient bedrock wells MW-5, MW-6.

Well locations are presented on Figure 1.

It should be noted that wells MW-7 and MW-9 were included in the scope of work for the first groundwater monitoring event, but upon site inspection, these wells were not located. This observation was previously noted in the report dated April 4, 2016. In the April 2016 report, GHD recommended that these wells not be replaced at this time, as both of these locations are within the proposed OU-3 source soil excavation



area. Due to the small size of the Site, GHD anticipates that practically all of the property will be used during the remediation to support the remedial activities (e.g., waste treatment plant, soil/sediment stockpile areas, sediment dewatering facility, contractor trailers, etc.). Any monitoring wells within the site boundaries will be in an active work area and will be highly susceptible to damage.

The scope of work for the December 2016 groundwater monitoring event included the following tasks:

- Measure depth-to-water at the aforementioned wells and presenting the groundwater elevations in a table.
- Collect groundwater samples and analyzing the samples for Target Compound List (TCL) Volatile Organic Compounds (VOCs), including Tentatively Identified Compounds (TICs); Semi-Volatile Organic Compounds (SVOCs), including TICs; Target Analyte List (TAL) metals; and Polychlorinated biphenyls (PCBs). It is to be noted that the laboratory contract for the analysis of the groundwater samples was changed from Eurofins to TestAmerica prior to the December 2016 sampling event.
- Waste management.
- Report results.

2. Groundwater Sampling and Analytical Results

All monitoring wells included in the monitoring program were purged and sampled using low-flow groundwater sampling protocols, in accordance with the GMP. The low-flow purge records are presented in Attachment A. The analytical groundwater results for the December 2016 groundwater sampling event, as well as the December 2015 and June 2016 sampling events (for comparison), are presented in Table 2. The analytical data summary sheets (Form I) of the laboratory report and the data validation report are presented in Attachments B and C, respectively. The monitoring well ID is written to the right of the "Client Sample ID" on the Form I data sheets. The analytical laboratory report also includes results for VOC and SVOC TICs, which are also tabulated in Table 2 of the validation report. Historical analytical groundwater data are presented in Attachment D and are used for comparison purposes, as discussed in the following paragraphs.

Figure 1 presents the parameters that were detected in the groundwater samples collected in December 2016 at each of the monitoring wells, along with the New York State Department of Environmental Conservation (NYSDEC) Class GA groundwater standards for comparison. Parameters that exceeded the respective Class GA groundwater standard are highlighted. Parameter concentrations are discussed in the following paragraphs.

VOCs

VOCs were detected at all monitoring wells, with the exception of MW-12S and MW-13S. The most frequent VOC detections were observed in wells MW-5S, MW-6S and MW-6; and the highest VOC detections were observed at well MW-10. The majority of these detections exceeded their respective NYSDEC Class GA groundwater standard. The VOCs with the higher concentrations at these wells



included: toluene (17,000 micrograms per liter ($\mu\text{g/L}$) at MW-10, 1,300 $\mu\text{g/L}$ at MW-6S), xylenes (16,000 $\mu\text{g/L}$ at MW-10¹, 1,000² $\mu\text{g/L}$ at MW-6S), and ethylbenzene (4,300 $\mu\text{g/L}$ at MW-10, 270 $\mu\text{g/L}$ at MW-6S), and cis-1,2-dichloroethene (620 $\mu\text{g/L}$ at MW-6S). Fewer VOC exceedances and generally with lower concentrations were observed in wells MW-5, MW-5S, MW-6, and MW-8.

Analytical results in December 2016 indicate that generally the same VOC parameters were detected as in previous sampling events, including ethylbenzene, toluene, and xylenes. Also, VOC concentrations at wells MW-6S and MW-10 continue to be higher than at other wells. Notable observations in the data include:

- A slight increase in the concentration of cis-1,2-dichloroethene at well MW-5 from 5.3 $\mu\text{g/L}$ in December 2015, to 190 $\mu\text{g/L}$ in June 2016, to 270 $\mu\text{g/L}$ in December 2016.
- Increases in concentrations for ethylbenzene, toluene, and xylenes at well MW-10 to levels comparable to those observed in October 2009 and June 2014. In December 2015, June 2016, and December 2016, ethylbenzene increased from 740 $\mu\text{g/L}$ to 2,900 $\mu\text{g/L}$ to 4,300 $\mu\text{g/L}$, respectively; for toluene, 3,200 $\mu\text{g/L}$ to 12,000 $\mu\text{g/L}$ to 17,000 $\mu\text{g/L}$; and for xylenes, 2,500 $\mu\text{g/L}$ to 10,000 $\mu\text{g/L}$ to 16,000 $\mu\text{g/L}$.
- Increases in concentrations for cis-1,2-dichloroethene, ethylbenzene, toluene, vinyl chloride, and xylenes at well MW-6S. In June to December 2016, cis-1,2-dichloroethene increased from 290 $\mu\text{g/L}$ to 620 $\mu\text{g/L}$; for ethylbenzene, 130 $\mu\text{g/L}$ to 270 $\mu\text{g/L}$; for toluene, 650 $\mu\text{g/L}$ to 1,300 $\mu\text{g/L}$; for vinyl chloride, 28 $\mu\text{g/L}$ to 81 J³ $\mu\text{g/L}$; and for xylenes, 490 $\mu\text{g/L}$ to 1,000 $\mu\text{g/L}$. All of these parameters, with the exception of vinyl chloride, were reported at lower concentrations in October 2009 than the respective concentrations between December 2015 and December 2016; the vinyl chloride concentration in October 2009 is comparable to the concentrations in December 2015 and June 2016.
- Decreases in concentrations for ethylbenzene, toluene, and xylenes from above the NYSDEC groundwater standards in June 2016, to below the respective standards in December 2016 at wells MW-2S and MW-2.
- In December 2016, no VOCs were detected at wells MW-12S and MW-13S on the south side of the Champlain Canal, which is consistent with the December 2015 and June 2016 analytical results, with the exception of very low concentrations of acetone reported at both wells in December 2015. Acetone is a common laboratory contaminant.

SVOCs

SVOCs were primarily detected at two monitoring wells including MW-6S and MW-10. All SVOC parameters that were detected, and have Class GA standards, exceeded their respective standard. The

¹ This includes m&p-xylenes at 12,000 $\mu\text{g/L}$ and o-xylene at 3,500 $\mu\text{g/L}$, both of which exceed the respective groundwater standard of 5 $\mu\text{g/L}$.

² This includes m&p-xylenes at 770 $\mu\text{g/L}$ and o-xylene at 260 $\mu\text{g/L}$, which exceed the respective groundwater standard of 5 $\mu\text{g/L}$.

³ J – Parameter concentration is estimated.



highest SVOC concentrations were detected at MW-10, and included phenol (22,000 µg/L), 4-methylphenol (17,000 µg/L), 2,4-dimethylphenol (7,000 µg/L), and 2-methylphenol (3,600 µg/L). Notable observations in the data include:

- The SVOC results for December 2016 at well MW-10 have increased slightly compared to the June 2016 results, but still remain below the historical October 2009 results.
- The SVOC results for December 2016 at well MW-6S have also increased slightly compared to the June 2016 results, and are also higher than the historical October 2009 results.
- Very few SVOC parameters were detected in December 2016 at wells MW-5S and MW-6, and at low concentrations (less than 15 µg/L), which is generally consistent with the October 2009, December 2015, and June 2016 results.
- No SVOC parameters were detected in December 2016 at the remaining wells MW-2S, MW-2, MW-5, MW-8, MW-12, and MW-13. This is generally consistent with previous sampling rounds of October 2009, December 2015, and June 2016.

Metals

The highest number of metal detections and exceedances of their respective Class GA groundwater standard were observed at well MW-10. At well MW-10, the metals that exceeded Class GA standards included: arsenic (84 µg/L), chromium (73 µg/L), copper (330 µg/L), lead (230 µg/L), manganese (670 µg/L), nickel (150 µg/L), and mercury (0.78 µg/L).

Analytical results for metals in December 2016 are generally consistent with the results from June 2016, December 2015, and the historical results from October 2009, and June 2014 for MW-10.

PCBs

Analytical results for PCBs in December 2016 were reported as non-detect in groundwater samples collected from six of the ten monitoring wells. Aroclor-1232 was detected at wells MW-5S (1.3/1.2 µg/L), and MW-8 (5.6 µg/L); aroclor-1242, at well MW-10 (130 µg/L); and aroclor-1248, at well MW-6S (8.3 µg/L).

Historically, PCBs were observed most frequently at wells MW-10 and MW-6S, with the highest PCB detection observed at well MW-10 in October 2009 (aroclor-1242 at 2,200 µg/L).

3. Data Validation Summary

The analytical results reported by the laboratory have been reviewed by a GHD chemist, with the evaluation presented in the GHD data validation report, in Attachment C. As per the validation report, the laboratory analytical results have been deemed acceptable, with a few qualifications as summarized below:



- Some continuing calibration VOC and SVOC standard results indicated variability in the instrument response for several VOCs in samples collected from several wells, and for one SVOC, pentachlorophenol, at two wells (MW-6, MW-8). The majority of these results were non-detect, but the detection limits were qualified as estimated. The analytical results for vinyl chloride (VOC) that was detected at wells MW-5, MW-5S, and MW-6S, were qualified as estimated.
- The continuing calibration standard for potassium indicated variability in the instrument response for potassium for the samples collected at wells MW-2 and MW-5, and the detections were qualified as estimated.
- Detected result for aroclor-1232 in the sample collected from MW-8 was qualified as estimated due to low surrogate recovery.
- Matrix Spike and Matrix Spike Duplicate recovery values were outside the control limits for aroclor-1248 that was detected at well MW-6S; the detected concentration was qualified as estimated.

4. Waste Management

All purge water was stored in a single 55-gallon drum, staged near the gated entrance to the Site off Saratoga Avenue. This purge water was profiled in December 2015 as RCRA non-hazardous and TSCA regulated. The drum was picked up for disposal on January 6, 2017.

5. Recommendations

GHD recommends that as part of the semi-annual groundwater monitoring program, the next monitoring event should be conducted in June 2017 including the same monitoring wells as in December 2016, and that the analytical laboratory TestAmerica should continue to be contracted for the sample analyses.

Should you have any questions on the above, please do not hesitate to contact us.

Sincerely,

GHD

A handwritten signature in blue ink, appearing to read "Jamie Puskas", is written over a light blue circular stamp.

Jamie Puskas, P. Eng.

JH/kf/14

Encl.

MW-8	NYSDEC	12/17/2015	6/7/2016	12/5/2016
VOCs				
Benzene	1	29/28	10	9.8
Ethylbenzene	5	5.0 U/5.0 U	1.2 J	1.0 U
m&p-Xylenes	5	32/31	5.2	2.0 U
o-Xylene	5	7.4/7.0	5.0 U	1.0 U
Xylenes (total)	--	40/38	5.2	2.0 U
SVOCs				
All Compounds	--	ND	ND	ND
PCBs				
Aroclor-1016 (PCB-1016)	0.09****	1.0 U/1.0 U	2.4 J	0.46 U
Aroclor-1232 (PCB-1232)	0.09****	1.0 U/1.0 U	1.0 U	5.6 J
Metals				
Aluminum	--	94.1 J/265 J	70.7 J	200 U
Antimony	3	20 U/20 U	7.2 J	20 U
Arsenic	25	20 U/20 U	16.0 J	16
Barium	1000	118 J/112 J	128 J	130
Cadmium	5	5.0 U/5.0 U	1.0 J	2 U
Calcium	--	57700/54600	75400	86500
Chromium	50	20 U/20 U	1.0 J	4 U
Copper	200	30 U/30 U	3.2 J	10 U
Iron	300	7200/7410	8900	9700
Lead	25	4.7 J/10 U	9.1 J	10 U
Magnesium	--	12400/11900	17000	17500
Manganese	300	6890/6430	10500	11100
Nickel	100	8.6 J/9.0 J	6.2 J	10 U
Potassium	--	4550/4800	4910	5800
Sodium	20000	431000/429000	323000	240000

MW-5	NYSDEC	12/16/2015	6/7/2016	12/5/2016
VOCs				
Benzene	1	4.7 J	5.0 U	10 U
Chlorobenzene	5	39	5.0 U	10 U
cis-1,2-Dichloroethene	5	5.3	190	270
Ethylbenzene	5	1.4 J	2.6 J	10 U
m&p-Xylenes	5	5.0 U	7.4	20 U
o-Xylene	5	1.6 J	2.0 J	10 U
Toluene	5	5.3	6.3	10 U
Trichloroethene	5	5.0 U	4.4 J	10 U
Vinyl chloride	2	8.2	26	36 J
Xylenes (total)	--	5.0 U	9.4	20 U
SVOCs				
4-Chloro-3-methylphenol	1***	7.6 J	10 U	4.9 U
PCBs				
All Compounds	--	ND	ND	ND
Metals				
Aluminum	--	200 UJ	480	1700
Antimony	3	20 U	8.9 J	20 U
Barium	1000	186 J	251	200
Cadmium	5	5.0 U	3.6 J	5.5
Calcium	--	52500	108000	107000
Chromium	50	20 U	2.2 J	4 U
Copper	200	30 U	3.6 J	10 U
Iron	300	5690	2410	5700
Lead	25	6.6 J	9.7 J	10 U
Magnesium	--	11400	36200	36300
Manganese	300	5020	1700	1600
Nickel	100	50 U	6.2 J	11
Potassium	--	2370	9130	9200 J
Sodium	20000	88800	102000	88100
Zinc	--	50 U	76.6	110

MW-5S	NYSDEC	12/17/2015	6/8/2016	12/5/2016
VOCs				
Benzene	1	10 U	5.5	4.4/4.1
Chlorobenzene	5	10 U	52	50/50
cis-1,2-Dichloroethene	5	290	54	49/47
Ethylbenzene	5	10 U	2.6 J	5.3/5.2
m&p-Xylenes	5	10 U	8.9	12/12
o-Xylene	5	10 U	2.5 J	3.6/3.6
Toluene	5	10 U	8.5	15/16
trans-1,2-Dichloroethene	5	2.2 J	5.0 U	1.0 U/1.0 U
Trichloroethene	5	7.3 J	5.0 U	1.0 U/1.0 U
Vinyl chloride	2	29	50	53 J/50 J
Xylenes (total)	--	10 U	9.4	16/16
SVOCs				
2,4-Dimethylphenol	1***	10 U	10 U	8.7/9.2
bis(2-Ethylhexyl)phthalate (DEHP)	5	10 U	1.8 J	4.7 U/4.7 U
PCBs				
Aroclor-1232 (PCB-1232)	0.09****	1.0 U	1.0 U	1.3/1.2
Metals				
Aluminum	--	552 J	200 U	200 U/200 U
Antimony	3	20 U	6.9 J	20 U/20 U
Arsenic	25	20 U	17.5 J	16/16
Barium	1000	135 J	172 J	230/220
Cadmium	5	3.1 J	5.0 U	2 U/2 U
Calcium	--	124000	48600	53300/51500
Chromium	50	20 U	0.64 J	4 U/4 U
Copper	200	30 U	2.0 J	10 U/10 U
Iron	300	2020	8170	9600/9400
Lead	25	6.7 J	10 U	10 U/10 U
Magnesium	--	41600	8870	9700/9300
Manganese	300	1770	4100	4590/4300
Nickel	100	50 U	2.4 J	10 U/10 U
Potassium	--	8490	2120	2800/2700
Sodium	20000	91600	89800	99300/96500
Zinc	--	58.7	50 U	10 U/10 U

MW-2S	NYSDEC	12/16/2015	6/7/2016	12/6/2016
VOCs				
Acetone	--	5.0 U	4.4 J/5.0 U	10 U
cis-1,2-Dichloroethene	5	5.0 U	2.2 J/5.0 U	1.0 U
Ethylbenzene	5	5.0 U	7.5/7.0	1.5
m&p-Xylenes	5	5.0 U	22/22	4.4
o-Xylene	5	5.0 U	7.2/6.5	1.1
Toluene	5	5.0 U	19/16	2.8
Xylenes (total)	--	5.0 U	30/28	5.5
SVOCs				
bis(2-Ethylhexyl)phthalate (DEHP)	5	10 U	10 U/2.4 J	4.6 U
PCBs				
All Compounds	--	ND	ND	ND
Metals				
Aluminum	--	1210 J	193 J/204	220
Antimony	3	20 U	11.6 J/7.7 J	20 U
Barium	1000	76.4 J	104 J/100 J	44
Calcium	--	52000	71600/71300	39300
Chromium	50	2.6 J	2.3 J/2.5 J	4 U
Copper	200	6.0 J	4.3 J/3.7 J	10 U
Iron	300	4990	335/400	200
Lead	25	5.4 J	8.8 J/7.4 J	10 U
Magnesium	--	13400	18600/18100	6900
Manganese	300	89.7	53.7/53.0	8.4
Nickel	100	57.0	2.2 J/2.4 J	10 U
Potassium	--	5720	7260/7330	4900
Sodium	20000	231000	309000/366000	217000

MW-2	NYSDEC	12/16/2015	6/7/2016	12/6/2016
VOCs				
Chlorobenzene	5	5.0 U	1.3 J	1.0 U
Ethylbenzene	5	5.0 U	8.3	1.1
m&p-Xylenes	5	5.0 U	25	3.2
o-Xylene	5	5.0 U	7.5	1.0 U
Toluene	5	5.0 U	26	1.9
Xylenes (total)	--	5.0 U	32	3.2
SVOCs				
All Compounds	--	ND	ND	ND
PCBs				
All Compounds	--	ND	ND	ND
Metals				
Aluminum	--	1320 J	88.7 J	3100
Antimony	3	20 U	7.9 J	20 U
Barium	1000	526	415	530
Cadmium	5	1.9 J	1.7 J	2.7
Calcium	--	119000	69700	68900
Chromium	50	3.4 J	2.1 J	4 U
Copper	200	4.2 J	3.1 J	10 U
Iron	300	2150	233	2100
Lead	25	5.6 J	11.3	10 U
Magnesium	--	40800	21300	20900
Manganese	300	615	602	800
Nickel	100	50 U	1.5 J	10 U
Potassium	--	13200	8840	8600 J
Sodium	20000	169000	238000	144000
Zinc	--	50 U	49.1 J	63

MW-10	NYSDEC	12/18/2015	6/7/2016	12/5/2016
VOCs				
1,1-Dichloroethane	5	6.4	7.1	400 U
1,2,4-Trichlorobenzene	5	1.1 J	1.3 J	400 U
1,2-Dichlorobenzene	3*	6.3	11	400 U
1,4-Dichlorobenzene	5	1.5 J	2.3 J	400 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	--	54 J	18	2000 U
Acetone	--	160	85	4000 U
Benzene	1	50 J	65	400 U
Chlorobenzene	5	69 J	110	400 U
cis-1,2-Dichloroethene	5	20 J	27	400 U
Cyclohexane	--	8.0 J	12	400 U
Ethylbenzene	5	740	2900	4300
Isopropyl benzene	5	13	19	400 U
m&p-Xylenes	5	1900	7500	12000
Methyl cyclohexane	--	1.3 J	1.7 J	400 U
Methylene chloride	5	12	6.5	400 U
o-Xylene	5	620	2400	3500
Styrene	5	77 J	120	400 U
Tetrachloroethene	5	25	33	400 U
Toluene	5	3200	12000	17000
Trichloroethene	5	94 J	130	400 U
Vinyl chloride	2	7.3	6.7	400 UJ
Xylenes (total)	--	2500	10000	16000
SVOCs				
2,4-Dimethylphenol	1***	6000	760 J	7000
2-Methylphenol	1***	3300	1600	3600 J
4-Methylphenol	1***	14000	6700	17000
Acetophenone	--	1000 U	5.6 J	250 U
Biphenyl (1,1-Biphenyl)	5	1000 U	13	250 U
Fluorene	--	1000 U	2.5 J	250 U
Naphthalene	--	210 J	45	250 U
Pentachlorophenol	1***	2000 UJ	46	500 U
Phenanthrene	--	1000 U	3.1 J	250 U
Phenol	1	14000	6500	22000
PCBs				
Aroclor-1016 (PCB-1016)	0.09****	10 UJ	39 J	13 U
Aroclor-1242 (PCB-1242)	0.09****	R	10 U	130
Metals				
Aluminum	--	5430 J	3910	3900
Antimony	3	13.7 J	9.3 J	20 U
Arsenic	25	95.7	62.9	84
Barium	1000	413	294	280
Beryllium	--	3.2 J	2.0 J	2.6
Cadmium	5	4.5 J	1.6 J	3.8
Calcium	--	12500	3390	79
Chromium	50	79.6	90.0	73
Cobalt	--	18.2 J	11.8 J	15
Copper	200	452	247	330
Iron	300	16700	12300	12700
Lead	25	269	166	230
Magnesium	--	1010	637	590
Manganese	300	927	750	670
Mercury	0.7	0.80 J	0.38	0.78
Nickel	100	194	124	150
Potassium	--	10500	9650	10200
Selenium	10	30.0 U	16.9 J	25 U
Sodium	20000	1720000	1380000	1200000
Vanadium	--	345	257	300
Zinc	--	79.4	62.1	61

MW-6S		NYSDEC	12/16/2015	6/8/2016	12/5/2016
VOCs					
1,1-Dichloroethane	5	25 U	2.2 J	25 U	
2-Butanone (Methyl ethyl ketone) (MEK)	--	34	17	250 U	
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	--	17 J	8.2	130 U	
Acetone	--	300	200	610	
Benzene	1	20 J	18	48	
Chlorobenzene	5	9.9 J	9.5	25 U	
cis-1,2-Dichloroethene	5	320	290	620	
Cyclohexane	--	25 U	6.5	25 U	
Ethylbenzene	5	130	130	270	
Isopropyl benzene	5	25 U	2.7 J	25 U	
m&p-Xylenes	5	350	360	770	
Methyl cyclohexane	--	25 U	1.5 J	25 U	
Methylene chloride	5	25 U	1.7 J	25 U	
o-Xylene	5	130	140	260	
Toluene	5	690	650	1300	
trans-1,2-Dichloroethene	5	25 U	1.0 J	25 U	
Trichloroethene	5	25 U	2.1 J	25 U	
Vinyl chloride	2	26	28	81 J	
Xylenes (total)	--	480	490	1000	
SVOCs					
2,4,5-Trichlorophenol	1***	5.1 J	5.7 J	47 U	
2,4,6-Trichlorophenol	1***	5.9 J	6.9 J	47 U	
2,4-Dichlorophenol	5	2.5 J	10 U	47 U	
2,4-Dimethylphenol	1***	200 U	10 U	1500	
2-Methylphenol	1***	490	440	1200	
4-Methylphenol	1***	10 U	1300	3800	
Diethyl phthalate	--	1.1 J	1.1 J	47 U	
Fluorene	--	1.1 J	10 U	47 U	
Naphthalene	--	23	20	47 U	
Pentachlorophenol	1***	7.2 J	6.1 J	93 U	
Phenol	1	790	610	2300	
PCBs					
Aroclor-1016 (PCB-1016)	0.09****	5.0 UJ	6.9	0.93 U	
Aroclor-1242 (PCB-1242)	0.09****	7.8 J	1.0 U	0.93 U	
Aroclor-1248 (PCB-1248)	0.09****	5.0 UJ	1.0 U	8.3 J	
Metals					
Aluminum	--	1320 J	466	350	
Arsenic	25	20 U	12.5 J	15 U	
Barium	1000	67.0 J	65.0 J	47	
Beryllium	--	5.0 U	0.16 J	2 U	
Cadmium	5	2.1 J	2.2 J	2 U	
Calcium	--	12500	13000	5300	
Chromium	50	5.9 J	6.6 J	8	
Copper	200	102	105	81	
Iron	300	3930	2480	1500	
Lead	25	49.9	47.7	38	
Magnesium	--	2760	2870	1100	
Manganese	300	1420	1170	230	
Mercury	0.7	0.030 J	0.031 J	0.2 U	
Nickel	100	25.9 J	29.8 J	37	
Potassium	--	1930	1610	1600	
Sodium	20000	309000	359000	506000	
Vanadium	--	22.7 J	26.9 J	37	
Zinc	--	86.0	70.4	35	

Table 1

**Groundwater Elevations
Groundwater Monitoring Program
Friedrichsohn Cooperage Site
Waterford, New York**

Well ID	Top of Riser Elev. (feet) ¹	Dec 16, 18, 2015		June 7-9, 2016		Dec 5-6, 2016	
		Depth To Water (feet BTOR)	Water Elev. (feet) ¹	Depth To Water (feet BTOR)	Water Elev. (feet) ¹	Depth To Water (feet BTOR)	Water Elev. (feet) ¹
MW-2	54.89	7.62	47.27	7.68	47.21	7.39	47.50
MW-2S	54.56	6.02	48.54	5.90	48.66	5.14	49.42
MW-5	48.57	3.05	45.52	3.15	45.42	3.02	45.55
MW-5S	49.08	9.72	39.36	9.81	39.27	10.51	38.57
MW-6	48.57	5.21	43.36	6.10	42.47	6.37	42.20
MW-6S	48.42	4.90	43.52	6.20	42.22	5.49	42.93
MW-8	54.22	6.92	47.30	7.27	46.95	6.95	47.27
MW-10	52.35	6.65	45.70	6.16	46.19	5.72	46.63
MW-12S	53.76	16.03	37.73	16.21	37.55	16.62	37.14
MW-13S	54.06	22.80	31.26	21.92	32.14	21.61	32.45

Notes:

- 1) Elevations are with respect to NAVD 1988.
BTOR - Below Top of Riser

Table 2

Groundwater Monitoring Program
Analytical Results Summary
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-2	MW-2	MW-2	MW-2S	MW-2S	MW-2S	MW-2S
Sample ID:	NYSDEC		WG-080987-121615-BP-001	WG-080987-060716-BP-003	WG-080987-120616-BP-009	WG-080987-121615-BP-002	WG-080987-060716-BP-004	WG-080987-060716-BP-005	WG-080987-120616-BP-008
Sample Date:	Class GA		12/16/2015	6/7/2016	12/6/2016	12/16/2015	6/7/2016	6/7/2016	12/6/2016
Parameters	Units	Groundwater Standards						Duplicate	
Volatile Organic Compounds									
1,1,1-Trichloroethane	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
1,1-Dichloroethane	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
1,1-Dichloroethene	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	0.04	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.0006	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	3*	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
1,2-Dichloroethane	µg/L	0.6	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
1,2-Dichloropropane	µg/L	1	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	3*	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	3*	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L		5.0 U	5.0 U	10 U	5.0 U	5.0 U	5.0 U	10 U
2-Hexanone	µg/L		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	µg/L		5.0 U	5.0 U	10 U	5.0 U	4.4 J	5.0 U	10 U
Benzene	µg/L	1	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Bromodichloromethane	µg/L		5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Bromoform	µg/L		5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Carbon disulfide	µg/L	60	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Carbon tetrachloride	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Chlorobenzene	µg/L	5	5.0 U	1.3 J	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Chloroethane	µg/L	5	5.0 U	5.0 U	1.0 UJ	5.0 U	5.0 U	5.0 U	1.0 UJ
Chloroform (Trichloromethane)	µg/L	7	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	2.2 J	5.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	0.4**	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Cyclohexane	µg/L		5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Dibromochloromethane	µg/L		5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5	5.0 U	5.0 U	1.0 UJ	5.0 U	5.0 U	5.0 U	1.0 UJ
Ethylbenzene	µg/L	5	5.0 U	8.3	1.1	5.0 U	7.5	7.0	1.5
Isopropyl benzene	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
m&p-Xylenes	µg/L	5	5.0 U	25	-	5.0 U	22	22	-
Methyl acetate	µg/L		5.0 U	5.0 U	2.5 U	5.0 U	5.0 U	5.0 U	2.5 U
Methyl cyclohexane	µg/L		5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L		5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Methylene chloride	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
o-Xylene	µg/L	5	5.0 U	7.5	-	5.0 U	7.2	6.5	-
Styrene	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Tetrachloroethene	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Toluene	µg/L	5	5.0 U	26	1.9	5.0 U	19	16	2.8
trans-1,2-Dichloroethene	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	0.4**	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Trichloroethene	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 UJ	5.0 UJ	1.0 U
Vinyl chloride	µg/L	2	5.0 U	5.0 U	1.0 UJ	5.0 U	5.0 U	5.0 U	1.0 UJ
Xylenes (total)	µg/L		5.0 U	32	3.2	5.0 U	30	28	5.5

Table 2

Groundwater Monitoring Program
Analytical Results Summary
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-2	MW-2	MW-2	MW-2S	MW-2S	MW-2S	MW-2S
Sample ID:	NYSDEC		WG-080987-121615-BP-001	WG-080987-060716-BP-003	WG-080987-120616-BP-009	WG-080987-121615-BP-002	WG-080987-060716-BP-004	WG-080987-060716-BP-005	WG-080987-120616-BP-008
Sample Date:	Class GA		12/16/2015	6/7/2016	12/6/2016	12/16/2015	6/7/2016	6/7/2016	12/6/2016
	Groundwater								
Parameters	Units	Standards						Duplicate	
Semi-volatile Organic Compounds									
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
2,4,5-Trichlorophenol	µg/L	1***	20 U	20 U	4.9 U	20 U	20 U	20 U	4.6 U
2,4,6-Trichlorophenol	µg/L	1***	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
2,4-Dichlorophenol	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
2,4-Dimethylphenol	µg/L	1***	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
2,4-Dinitrophenol	µg/L	1***	20 U	20 U	9.7 U	20 U	20 U	20 U	9.3 U
2,4-Dinitrotoluene	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
2,6-Dinitrotoluene	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
2-Chloronaphthalene	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
2-Chlorophenol	µg/L	1***	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
2-Methylnaphthalene	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
2-Methylphenol	µg/L	1***	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
2-Nitroaniline	µg/L	5	20 U	20 U	9.7 U	20 U	20 U	20 U	9.3 U
2-Nitrophenol	µg/L	1***	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
3,3'-Dichlorobenzidine	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
3-Nitroaniline	µg/L	5	20 U	20 U	9.7 U	20 U	20 U	20 U	9.3 U
4,6-Dinitro-2-methylphenol	µg/L	1***	20 U	20 U	9.7 U	20 U	20 U	20 U	9.3 U
4-Bromophenyl phenyl ether	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
4-Chloro-3-methylphenol	µg/L	1***	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
4-Chloroaniline	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
4-Chlorophenyl phenyl ether	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
4-Methylphenol	µg/L	1***	10 U	10 U	9.7 U	10 U	10 U	10 U	9.3 U
4-Nitroaniline	µg/L	5	20 U	20 U	9.7 U	20 U	20 U	20 U	9.3 U
4-Nitrophenol	µg/L	1***	20 U	20 U	9.7 U	20 U	20 U	20 U	9.3 U
Acenaphthene	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Acenaphthylene	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Acetophenone	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Anthracene	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Atrazine	µg/L	7.5	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Benzaldehyde	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Benzo(a)anthracene	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Benzo(a)pyrene	µg/L	ND	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Benzo(b)fluoranthene	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Benzo(g,h,i)perylene	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Benzo(k)fluoranthene	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Biphenyl (1,1-Biphenyl)	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
bis(2-Chloroethoxy)methane	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
bis(2-Chloroethyl)ether	µg/L	1	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	2.4 J	4.6 U
Butyl benzylphthalate (BBP)	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Caprolactam	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Carbazole	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Chrysene	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Dibenz(a,h)anthracene	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Dibenzofuran	µg/L		10 U	10 U	9.7 U	10 U	10 U	10 U	9.3 U
Diethyl phthalate	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Dimethyl phthalate	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Di-n-butylphthalate (DBP)	µg/L	50	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Di-n-octyl phthalate (DnOP)	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Fluoranthene	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Fluorene	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Hexachlorobenzene	µg/L	0.04	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Hexachlorobutadiene	µg/L	0.5	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Hexachlorocyclopentadiene	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Hexachloroethane	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Indeno(1,2,3-cd)pyrene	µg/L		10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U

Table 2

Groundwater Monitoring Program
Analytical Results Summary
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-2	MW-2	MW-2	MW-2S	MW-2S	MW-2S	MW-2S
Sample ID:		NYSDEC	WG-080987-121615-BP-001	WG-080987-060716-BP-003	WG-080987-120616-BP-009	WG-080987-121615-BP-002	WG-080987-060716-BP-004	WG-080987-060716-BP-005	WG-080987-120616-BP-008
Sample Date:		Class GA	12/16/2015	6/7/2016	12/6/2016	12/16/2015	6/7/2016	6/7/2016	12/6/2016
		Groundwater						Duplicate	
Parameters		Standards							
		Units							
Isophorone		µg/L	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Naphthalene		µg/L	10 U	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Nitrobenzene		µg/L	0.4	10 U	4.9 U	10 U	10 U	10 U	4.6 U
N-Nitrosodi-n-propylamine		µg/L		10 U	4.9 U	10 U	10 U	10 U	4.6 U
N-Nitrosodiphenylamine		µg/L		10 U	4.9 U	10 U	10 U	10 U	4.6 U
Pentachlorophenol		µg/L	1***	20 U	9.7 U	20 U	20 U	20 U	9.3 U
Phenanthrene		µg/L		10 U	4.9 U	10 U	10 U	10 U	4.6 U
Phenol		µg/L	1	10 U	4.9 U	10 U	10 U	10 U	4.6 U
Pyrene		µg/L		10 U	4.9 U	10 U	10 U	10 U	4.6 U
Metals									
Aluminum		µg/L	1320 J	88.7 J	3100	1210 J	193 J	204	220
Antimony		µg/L	3	20 U	20 U	20 U	11.6 J	7.7 J	20 U
Arsenic		µg/L	25	20 U	15 U	20 U	20 U	20 U	15 U
Barium		µg/L	1000	526	415	76.4 J	104 J	100 J	44
Beryllium		µg/L		5.0 U	5.0 U	2 U	5.0 U	5.0 U	2 U
Cadmium		µg/L	5	1.9 J	1.7 J	2.7	5.0 U	5.0 U	2 U
Calcium		µg/L		119000	69700	68900	52000	71600	39300
Chromium		µg/L	50	3.4 J	2.1 J	4 U	2.6 J	2.3 J	4 U
Cobalt		µg/L		50 U	50 U	50 U	50 U	50 U	4 U
Copper		µg/L	200	4.2 J	3.1 J	10 U	6.0 J	4.3 J	3.7 J
Iron		µg/L	300	2150	233	2100	4990	335	400
Lead		µg/L	25	5.6 J	11.3	10 U	5.4 J	8.8 J	7.4 J
Magnesium		µg/L		40800	21300	20900	13400	18600	18100
Manganese		µg/L	300	615	602	800	89.7	53.7	53.0
Mercury		µg/L	0.7	0.20 UJ	0.20 U	0.2 U	0.20 UJ	0.20 U	0.2 U
Nickel		µg/L	100	50 U	1.5 J	10 U	50 U	2.2 J	2.4 J
Potassium		µg/L		13200	8840	8600 J	5720	7260	7330
Selenium		µg/L	10	30.0 U	30 U	25 U	30.0 U	30 U	30 U
Silver		µg/L	50	30 U	30 U	6 U	30 U	30 U	30 U
Sodium		µg/L	20000	169000	236000	144000	231000	309000	306000
Thallium		µg/L		20 U	20 U	20 U	20 U	20 U	20 U
Vanadium		µg/L		50 U	50 U	5 U	50 U	50 U	5 U
Zinc		µg/L		50 U	49.1 J	63	50 U	50 U	10 U
PCBs									
Aroclor-1016 (PCB-1016)		µg/L	0.09****	1.0 U	1.0 U	0.46 U	1.0 U	1.0 U	0.51 U
Aroclor-1221 (PCB-1221)		µg/L	0.09****	1.0 U	1.0 U	0.46 U	1.0 U	1.0 U	0.51 U
Aroclor-1232 (PCB-1232)		µg/L	0.09****	1.0 U	1.0 U	0.46 U	1.0 U	1.0 U	0.51 U
Aroclor-1242 (PCB-1242)		µg/L	0.09****	1.0 U	1.0 U	0.46 U	1.0 U	1.0 U	0.51 U
Aroclor-1248 (PCB-1248)		µg/L	0.09****	1.0 U	1.0 U	0.46 U	1.0 U	1.0 U	0.51 U
Aroclor-1254 (PCB-1254)		µg/L	0.09****	1.0 U	1.0 U	0.46 U	1.0 U	1.0 U	0.51 U
Aroclor-1260 (PCB-1260)		µg/L	0.09****	1.0 U	1.0 U	0.46 U	1.0 U	1.0 U	0.51 U

Notes:

- J - Estimated concentration.
- R - Rejected.
- U - Not detected at the associated reporting limit.
- UJ - Not detected; associated reporting limit is estimated.
- * - Standard applies to sum of 1,2-, 1,3-, and 1,4-dichlorobenzene
- ** - Standard applies to sum of cis- and trans-1,3-dichloropropene
- *** - Standard applies to total phenolic compounds
- **** - Standard applies to total PCBs
- 169000 - Parameter concentration exceeds associated groundwater standard.

Table 2

Groundwater Monitoring Program
Analytical Results Summary
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-5	MW-5	MW-5	MW-5S	MW-5S	MW-5S	MW-5S
Sample ID:	NYSDEC		WG-080987-121615-BP-005	WG-080987-060716-BP-006	WG-080987-120516-BP-005	WG-080987-121715-BP-006	WG-080987-060816-BP-007	WG-080987-120516-BP-006	WG-080987-120516-BP-007
Sample Date:	Class GA		12/16/2015	6/7/2016	12/5/2016	12/17/2015	6/8/2016	12/5/2016	12/5/2016
Parameters	Units	Groundwater Standards							Duplicate
Volatile Organic Compounds									
1,1,1-Trichloroethane	µg/L	5	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	5	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	5	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	5	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	0.04	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.0006	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	3*	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	0.6	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	1	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	3*	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	3*	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L		5.0 U	5.0 U	100 U	10 U	5.0 U	10 U	10 U
2-Hexanone	µg/L		5.0 U	5.0 U	50 U	10 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L		5.0 U	5.0 U	50 U	10 U	5.0 U	5.0 U	5.0 U
Acetone	µg/L		5.0 U	5.0 U	100 U	10 U	5.0 U	10 U	10 U
Benzene	µg/L	1	4.7 J	5.0 U	10 U	10 U	5.5	4.4	4.1
Bromodichloromethane	µg/L		5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
Bromoform	µg/L		5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	60	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	5	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	5	39	5.0 U	10 U	10 U	52	50	50
Chloroethane	µg/L	5	5.0 U	5.0 U	10 UJ	10 U	5.0 U	1.0 UJ	1.0 UJ
Chloroform (Trichloromethane)	µg/L	7	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	5	5.3	190	270	290	54	49	47
cis-1,3-Dichloropropene	µg/L	0.4**	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
Cyclohexane	µg/L		5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
Dibromochloromethane	µg/L		5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5	5.0 U	5.0 U	10 UJ	10 U	5.0 U	1.0 UJ	1.0 UJ
Ethylbenzene	µg/L	5	1.4 J	2.6 J	10 U	10 U	2.8 J	5.3	5.2
Isopropyl benzene	µg/L	5	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
m&p-Xylenes	µg/L	5	5.0 U	7.4	-	10 U	6.9	-	-
Methyl acetate	µg/L		5.0 U	5.0 U	25 U	10 U	5.0 U	2.5 U	2.5 U
Methyl cyclohexane	µg/L		5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L		5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
Methylene chloride	µg/L	5	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
o-Xylene	µg/L	5	1.6 J	2.0 J	-	10 U	2.5 J	-	-
Styrene	µg/L	5	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
Toluene	µg/L	5	5.3	6.3	10 U	10 U	8.5	15	16
trans-1,2-Dichloroethene	µg/L	5	5.0 U	5.0 U	10 U	2.2 J	5.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	0.4**	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	5.0 U	4.4 J	10 U	7.3 J	5.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	5	5.0 U	5.0 U	10 U	10 U	5.0 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	5	5.0 U	5.0 UJ	10 U	10 U	5.0 UJ	1.0 U	1.0 U
Vinyl chloride	µg/L	2	8.2	26	36 J	29	50	53 J	50 J
Xylenes (total)	µg/L		5.0 U	9.4	20 U	10 U	9.4	16	16

Table 2

Groundwater Monitoring Program
Analytical Results Summary
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-5	MW-5	MW-5	MW-5S	MW-5S	MW-5S	MW-5S
Sample ID:	NYSDEC		WG-080987-121615-BP-005	WG-080987-060716-BP-006	WG-080987-120516-BP-005	WG-080987-121715-BP-006	WG-080987-060816-BP-007	WG-080987-120516-BP-006	WG-080987-120516-BP-007
Sample Date:	Class GA		12/16/2015	6/7/2016	12/5/2016	12/17/2015	6/8/2016	12/5/2016	12/5/2016
Parameters	Groundwater								Duplicate
Units	Standards								
Semi-volatile Organic Compounds									
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
2,4,5-Trichlorophenol	µg/L	1***	20 U	20 U	4.9 U	20 U	20 U	4.7 U	4.7 U
2,4,6-Trichlorophenol	µg/L	1***	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
2,4-Dichlorophenol	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
2,4-Dimethylphenol	µg/L	1***	10 U	10 U	4.9 U	10 U	10 U	8.7	9.2
2,4-Dinitrophenol	µg/L	1***	20 U	20 U	9.7 U	20 U	20 U	9.4 U	9.4 U
2,4-Dinitrotoluene	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
2,6-Dinitrotoluene	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
2-Chloronaphthalene	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
2-Chlorophenol	µg/L	1***	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
2-Methylnaphthalene	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
2-Methylphenol	µg/L	1***	10 U	10 U	4.9 U	10 U	10 UJ	4.7 U	4.7 U
2-Nitroaniline	µg/L	5	20 U	20 U	9.7 U	20 U	20 U	9.4 U	9.4 U
2-Nitrophenol	µg/L	1***	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
3,3'-Dichlorobenzidine	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
3-Nitroaniline	µg/L	5	20 U	20 U	9.7 U	20 U	20 U	9.4 U	9.4 U
4,6-Dinitro-2-methylphenol	µg/L	1***	20 U	20 U	9.7 U	20 U	20 U	9.4 U	9.4 U
4-Bromophenyl phenyl ether	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
4-Chloro-3-methylphenol	µg/L	1***		10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
4-Chloroaniline	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
4-Chlorophenyl phenyl ether	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
4-Methylphenol	µg/L	1***	10 U	10 U	9.7 U	10 U	10 U	9.4 U	9.4 U
4-Nitroaniline	µg/L	5	20 U	20 U	9.7 U	20 U	20 U	9.4 U	9.4 U
4-Nitrophenol	µg/L	1***	20 U	20 U	9.7 U	20 U	20 U	9.4 U	9.4 U
Acenaphthene	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Acenaphthylene	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Acetophenone	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Anthracene	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Atrazine	µg/L	7.5	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Benzaldehyde	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Benzo(a)anthracene	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Benzo(a)pyrene	µg/L	ND	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Benzo(b)fluoranthene	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Benzo(g,h,i)perylene	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Benzo(k)fluoranthene	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Biphenyl (1,1-Biphenyl)	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
bis(2-Chloroethoxy)methane	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
bis(2-Chloroethyl)ether	µg/L	1	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	5	10 U	10 U	4.9 U	10 U	1.8 J	4.7 U	4.7 U
Butyl benzylphthalate (BBP)	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Caprolactam	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Carbazole	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Chrysene	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Dibenz(a,h)anthracene	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Dibenzofuran	µg/L		10 U	10 U	9.7 U	10 U	10 U	9.4 U	9.4 U
Diethyl phthalate	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Dimethyl phthalate	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Di-n-butylphthalate (DBP)	µg/L	50	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Di-n-octyl phthalate (DnOP)	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Fluoranthene	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Fluorene	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Hexachlorobenzene	µg/L	0.04	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Hexachlorobutadiene	µg/L	0.5	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Hexachlorocyclopentadiene	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Hexachloroethane	µg/L	5	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Indeno(1,2,3-cd)pyrene	µg/L		10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U

Table 2

Groundwater Monitoring Program
Analytical Results Summary
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-5	MW-5	MW-5	MW-5S	MW-5S	MW-5S	MW-5S
Sample ID:		NYSDEC	WG-080987-121615-BP-005	WG-080987-060716-BP-006	WG-080987-120516-BP-005	WG-080987-121715-BP-006	WG-080987-060816-BP-007	WG-080987-120516-BP-006	WG-080987-120516-BP-007
Sample Date:		Class GA	12/16/2015	6/7/2016	12/5/2016	12/17/2015	6/8/2016	12/5/2016	12/5/2016
		Groundwater							
Parameters		Standards							Duplicate
Units									
Isophorone		µg/L	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Naphthalene		µg/L	10 U	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Nitrobenzene		µg/L	0.4	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
N-Nitrosodi-n-propylamine		µg/L		10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
N-Nitrosodiphenylamine		µg/L		10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Pentachlorophenol		µg/L	1***	20 U	9.7 U	20 U	20 U	9.4 U	9.4 U
Phenanthrene		µg/L		10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Phenol		µg/L	1	10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Pyrene		µg/L		10 U	4.9 U	10 U	10 U	4.7 U	4.7 U
Metals									
Aluminum		µg/L	200 UJ	480	1700	552 J	200 U	200 U	200 U
Antimony		µg/L	3	20 U	20 U	20 U	6.9 J	20 U	20 U
Arsenic		µg/L	25	20 U	15 U	20 U	17.5 J	16	16
Barium		µg/L	1000	186 J	251	200	172 J	230	220
Beryllium		µg/L		5.0 U	5.0 U	2 U	5.0 U	2 U	2 U
Cadmium		µg/L	5	5.0 U	3.6 J	5.5	5.0 U	2 U	2 U
Calcium		µg/L		52500	108000	107000	48600	53300	51500
Chromium		µg/L	50	20 U	2.2 J	4 U	20 U	0.64 J	4 U
Cobalt		µg/L		50 U	50 U	4 U	50 U	4 U	4 U
Copper		µg/L	200	30 U	3.6 J	10 U	30 U	2.0 J	10 U
Iron		µg/L	300	5680	2410	5700	2020	8170	9600
Lead		µg/L	25	6.6 J	9.7 J	10 U	6.7 J	10 U	10 U
Magnesium		µg/L		11400	36200	36300	41600	8870	9700
Manganese		µg/L	300	5020	1700	1600	1770	4100	4500
Mercury		µg/L	0.7	0.20 UJ	0.20 U	0.2 U	0.20 UJ	0.20 U	0.2 U
Nickel		µg/L	100	50 U	6.2 J	11	50 U	2.4 J	10 U
Potassium		µg/L		2370	9130	9200 J	8490	2120	2800
Selenium		µg/L	10	30.0 U	30 U	25 U	30.0 U	30 U	25 U
Silver		µg/L	50	30 U	30 U	6 U	30 U	6 U	6 U
Sodium		µg/L	20000	88800	102000	88100	91600	89800	99300
Thallium		µg/L		20 U	20 U	20 U	20 U	20 U	20 U
Vanadium		µg/L		50 U	50 U	5 U	50 U	5 U	5 U
Zinc		µg/L		50 U	76.6	110	58.7	50 U	10 U
PCBs									
Aroclor-1016 (PCB-1016)		µg/L	0.09****	1.0 U	1.0 U	0.46 U	1.0 U	0.46 U	0.47 U
Aroclor-1221 (PCB-1221)		µg/L	0.09****	1.0 U	1.0 U	0.46 U	1.0 U	0.46 U	0.47 U
Aroclor-1232 (PCB-1232)		µg/L	0.09****	1.0 U	1.0 U	0.46 U	1.0 U	1.3	1.2
Aroclor-1242 (PCB-1242)		µg/L	0.09****	1.0 U	1.0 U	0.46 U	1.0 U	0.46 U	0.47 U
Aroclor-1248 (PCB-1248)		µg/L	0.09****	1.0 U	1.0 U	0.46 U	1.0 U	0.46 U	0.47 U
Aroclor-1254 (PCB-1254)		µg/L	0.09****	1.0 U	1.0 U	0.46 U	1.0 U	0.46 U	0.47 U
Aroclor-1260 (PCB-1260)		µg/L	0.09****	1.0 U	1.0 U	0.46 U	1.0 U	0.46 U	0.47 U

Notes:

J - Estimated concentration.
R - Rejected.
U - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated.
* - Standard applies to sum of 1,2-, 1,3-, and 1,4-dichlorobenzene
** - Standard applies to sum of cis- and trans-1,3-dichloropropene
*** - Standard applies to total phenolic compounds
**** - Standard applies to total PCBs

169000

Parameter concentration exceeds associated groundwater standard.

Table 2

Groundwater Monitoring Program
Analytical Results Summary
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-6	MW-6	MW-6	MW-6S	MW-6S	MW-6S	MW-8
Sample ID:	NYSDEC		WG-080987-121615-BP-003	WG-080987-060816-BP-008	WG-080987-120516-BP-003	WG-080987-121615-BP-004	WG-080987-060816-BP-009	WG-080987-120516-BP-004	WG-080987-121715-BP-009
Sample Date:	Class GA		12/16/2015	6/8/2016	12/5/2016	12/16/2015	6/8/2016	12/5/2016	12/17/2015
Parameters	Units	Groundwater Standards							
Volatile Organic Compounds									
1,1,1-Trichloroethane	µg/L	5	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
1,1,2,2-Tetrachloroethane	ug/L	5	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
1,1,2-Trichloroethane	µg/L	1	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
1,1-Dichloroethane	µg/L	5	5.0 U	5.0 U	1.0 U	25 U	2.2 J	25 U	5.0 U
1,1-Dichloroethene	µg/L	5	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
1,2,4-Trichlorobenzene	µg/L	5	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	0.04	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.0006	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
1,2-Dichlorobenzene	µg/L	3*	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
1,2-Dichloroethane	µg/L	0.6	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
1,2-Dichloropropane	µg/L	1	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
1,3-Dichlorobenzene	µg/L	3*	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
1,4-Dichlorobenzene	µg/L	3*	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L		5.0 U	5.0 U	10 U	34	17	250 U	5.0 U
2-Hexanone	µg/L		5.0 U	5.0 U	5.0 U	25 U	5.0 U	130 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L		5.0 U	5.0 U	5.0 U	17 J	8.2	130 U	5.0 U
Acetone	µg/L		19	11	11	300	200	610	5.0 U
Benzene	µg/L	1	5.0 U	5.0 U	1.0 U	20 J	18	48	28
Bromodichloromethane	µg/L		5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
Bromoform	µg/L		5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
Carbon disulfide	µg/L	60	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
Carbon tetrachloride	µg/L	5	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
Chlorobenzene	µg/L	5	5.0 U	5.0 U	1.0 U	9.9 J	9.5	25 U	5.0 U
Chloroethane	µg/L	5	5.0 U	5.0 U	1.0 UJ	25 U	5.0 U	25 UJ	5.0 U
Chloroform (Trichloromethane)	µg/L	7	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	5	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5	5.4	5.0 U	2.2	320	290	620	5.0 U
cis-1,3-Dichloropropene	µg/L	0.4**	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
Cyclohexane	µg/L		5.0 U	5.0 U	1.0 U	25 U	6.5	25 U	5.0 U
Dibromochloromethane	µg/L		5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5	5.0 U	5.0 U	1.0 UJ	25 U	5.0 U	25 UJ	5.0 U
Ethylbenzene	µg/L	5	5.0 U	1.2 J	4.7	130	130	270	5.0 U
Isopropyl benzene	µg/L	5	5.0 U	5.0 U	1.0 U	25 U	2.7 J	25 U	5.0 U
m&p-Xylenes	µg/L	5	5.0 U	3.5 J	-	350	360	-	32
Methyl acetate	µg/L		5.0 U	5.0 U	2.5 U	25 U	5.0 U	63 U	5.0 U
Methyl cyclohexane	µg/L		5.0 U	5.0 U	1.0 U	25 U	1.5 J	25 U	5.0 U
Methyl tert butyl ether (MTBE)	µg/L		5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
Methylene chloride	µg/L	5	5.0 U	5.0 U	1.0 U	25 U	1.7 J	25 U	5.0 U
o-Xylene	µg/L	5	5.0 U	5.0 U	-	130	140	-	7.4
Styrene	µg/L	5	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
Tetrachloroethene	µg/L	5	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
Toluene	µg/L	5	12	2.8 J	15	690	650	1300	5.0 U
trans-1,2-Dichloroethene	µg/L	5	5.0 U	5.0 U	1.0 U	25 U	1.0 J	25 U	5.0 U
trans-1,3-Dichloropropene	µg/L	0.4**	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
Trichloroethene	µg/L	5	5.0 U	5.0 U	1.0 U	25 U	2.1 J	25 U	5.0 U
Trichlorofluoromethane (CFC-11)	µg/L	5	5.0 U	5.0 U	1.0 U	25 U	5.0 U	25 U	5.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	5	5.0 U	5.0 UJ	1.0 U	25 U	5.0 U	25 U	5.0 U
Vinyl chloride	µg/L	2	1.5 J	5.0 U	1.0 UJ	26	28	81 J	5.0 U
Xylenes (total)	µg/L		5.0 U	3.5 J	17	480	490	1000	40

Table 2

Groundwater Monitoring Program
Analytical Results Summary
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-6	MW-6	MW-6	MW-6S	MW-6S	MW-6S	MW-8
Sample ID:			WG-080987-121615-BP-003	WG-080987-060816-BP-008	WG-080987-120516-BP-003	WG-080987-121615-BP-004	WG-080987-060816-BP-009	WG-080987-120516-BP-004	WG-080987-121715-BP-009
Sample Date:			12/16/2015	6/8/2016	12/5/2016	12/16/2015	6/8/2016	12/5/2016	12/17/2015
Parameters	Units	Groundwater Standards							
Semi-volatile Organic Compounds									
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	5	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
2,4,5-Trichlorophenol	µg/L	1***	1.0 J	20 UJ	4.7 U	5.1 J	5.7 J	47 U	20 U
2,4,6-Trichlorophenol	µg/L	1***	10 U	10 UJ	4.7 U	5.9 J	6.9 J	47 U	10 U
2,4-Dichlorophenol	µg/L	5	10 U	10 UJ	4.7 U	2.5 J	10 U	47 U	10 U
2,4-Dimethylphenol	µg/L	1***	4.5 J	10 UJ	4.9	200 U	10 U	1500	10 U
2,4-Dinitrophenol	µg/L	1***	20 U	20 UJ	9.4 U	20 U	20 U	93 U	20 U
2,4-Dinitrotoluene	µg/L	5	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
2,6-Dinitrotoluene	µg/L	5	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
2-Chloronaphthalene	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
2-Chlorophenol	µg/L	1***	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
2-Methylnaphthalene	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
2-Methylphenol	µg/L	1***	12	10 UJ	5.6	490	440	1200	10 U
2-Nitroaniline	µg/L	5	20 U	20 UJ	9.4 U	20 U	20 U	93 U	20 U
2-Nitrophenol	µg/L	1***	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
3,3'-Dichlorobenzidine	µg/L	5	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
3-Nitroaniline	µg/L	5	20 U	20 UJ	9.4 U	20 U	20 U	93 U	20 U
4,6-Dinitro-2-methylphenol	µg/L	1***	8.1 J	20 UJ	9.4 U	20 U	20 U	93 U	20 U
4-Bromophenyl phenyl ether	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
4-Chloro-3-methylphenol	µg/L	1***	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
4-Chloroaniline	µg/L	5	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
4-Chlorophenyl phenyl ether	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
4-Methylphenol	µg/L	1***	33	10 UJ	9.4 U	10 U	1300	3800	10 U
4-Nitroaniline	µg/L	5	20 U	20 UJ	9.4 U	20 U	20 U	93 U	20 U
4-Nitrophenol	µg/L	1***	1.8 J	20 UJ	9.4 U	20 U	20 U	93 U	20 U
Acenaphthene	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Acenaphthylene	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Acetophenone	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Anthracene	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Atrazine	µg/L	7.5	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Benzaldehyde	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Benzo(a)anthracene	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Benzo(a)pyrene	µg/L	ND	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Benzo(b)fluoranthene	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Benzo(g,h,i)perylene	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Benzo(k)fluoranthene	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Biphenyl (1,1-Biphenyl)	µg/L	5	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
bis(2-Chloroethoxy)methane	µg/L	5	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
bis(2-Chloroethyl)ether	µg/L	1	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	5	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Butyl benzylphthalate (BBP)	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Caprolactam	µg/L		2.6 J	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Carbazole	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Chrysene	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Dibenz(a,h)anthracene	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Dibenzofuran	µg/L		10 U	10 UJ	9.4 U	10 U	10 U	93 U	10 U
Diethyl phthalate	µg/L		10 U	10 UJ	4.7 U	1.1 J	1.1 J	47 U	10 U
Dimethyl phthalate	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Di-n-butylphthalate (DBP)	µg/L	50	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Di-n-octyl phthalate (DnOP)	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Fluoranthene	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Fluorene	µg/L		10 U	10 UJ	4.7 U	1.1 J	10 U	47 U	10 U
Hexachlorobenzene	µg/L	0.04	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Hexachlorobutadiene	µg/L	0.5	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Hexachlorocyclopentadiene	µg/L	5	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Hexachloroethane	µg/L	5	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Indeno(1,2,3-cd)pyrene	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U

Table 2

Groundwater Monitoring Program
Analytical Results Summary
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-6	MW-6	MW-6	MW-6S	MW-6S	MW-6S	MW-8
Sample ID:			WG-080987-121615-BP-003	WG-080987-060816-BP-008	WG-080987-120516-BP-003	WG-080987-121615-BP-004	WG-080987-060816-BP-009	WG-080987-120516-BP-004	WG-080987-121715-BP-009
Sample Date:			12/16/2015	6/8/2016	12/5/2016	12/16/2015	6/8/2016	12/5/2016	12/17/2015
Parameters	Units	NYSDEC Class GA Groundwater Standards							
Isophorone	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Naphthalene	µg/L		1.3 J	10 UJ	4.7 U	23	20	47 U	10 U
Nitrobenzene	µg/L	0.4	10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
N-Nitrosodi-n-propylamine	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
N-Nitrosodiphenylamine	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Pentachlorophenol	µg/L	1***	20 U	20 UJ	9.4 UJ	7.2 J	6.1 J	93 U	20 U
Phenanthrene	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Phenol	µg/L	1	37	10 UJ	11	790	610	2300	10 U
Pyrene	µg/L		10 U	10 UJ	4.7 U	10 U	10 U	47 U	10 U
Metals									
Aluminum	µg/L		390 J	110 J	200 U	1320 J	466	350	94.1 J
Antimony	µg/L	3	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Arsenic	µg/L	25	20 U	5.0 J	15 U	20 U	12.5 J	15 U	20 U
Barium	µg/L	1000	458	526	460	67.0 J	65.0 J	47	118 J
Beryllium	µg/L		5.0 U	5.0 U	2 U	5.0 U	0.16 J	2 U	5.0 U
Cadmium	µg/L	5	5.0 U	5.0 U	2 U	2.1 J	2.2 J	2 U	5.0 U
Calcium	µg/L		9640	9800	7600	12500	13000	5300	57700
Chromium	µg/L	50	1.1 J	20 U	4 U	5.9 J	6.6 J	8	20 U
Cobalt	µg/L		50 U	50 U	4 U	50 U	50 U	4 U	50 U
Copper	µg/L	200	30 U	3.2 J	10 U	102	105	81	30 U
Iron	µg/L	300	844	443	260	3930	2480	1500	7200
Lead	µg/L	25	5.4 J	10 U	10 U	49.9	47.7	38	4.7 J
Magnesium	µg/L		418 J	318 J	310	2760	2870	1100	12400
Manganese	µg/L	300	10.1 J	7.7 J	3	1420	1170	230	6890
Mercury	µg/L	0.7	0.20 UJ	0.20 U	0.2 U	0.030 J	0.031 J	0.2 U	0.20 UJ
Nickel	µg/L	100	50 U	8.2 J	10 U	25.9 J	29.8 J	37	8.6 J
Potassium	µg/L		7520	6310	6400	1930	1610	1600	4560
Selenium	µg/L	10	30.0 U	30 U	25 U	30.0 U	30 U	25 U	30.0 U
Silver	µg/L	50	30 U	30 U	6 U	30 U	30 U	6 U	30 U
Sodium	µg/L	20000	81000	95200	110000	309000	359000	506000	431000
Thallium	µg/L		20 U	20 U	20 U	20 U	20 U	20 U	20 U
Vanadium	µg/L		50 U	1.5 J	5 U	22.7 J	26.9 J	37	50 U
Zinc	µg/L		50 U	56.6	25	86.0	70.4	35	50 U
PCBs									
Aroclor-1016 (PCB-1016)	µg/L	0.09****	1.0 U	1.0 U	0.46 U	5.0 UJ	6.9	0.93 U	1.0 U
Aroclor-1221 (PCB-1221)	µg/L	0.09****	1.0 U	1.0 U	0.46 U	5.0 UJ	1.0 U	0.93 U	1.0 U
Aroclor-1232 (PCB-1232)	µg/L	0.09****	1.0 U	1.0 U	0.46 U	5.0 UJ	1.0 U	0.93 U	1.0 U
Aroclor-1242 (PCB-1242)	µg/L	0.09****	1.0 U	1.0 U	0.46 U	7.8 J	1.0 U	0.93 U	1.0 U
Aroclor-1248 (PCB-1248)	µg/L	0.09****	1.0 U	1.0 U	0.46 U	5.0 UJ	1.0 U	8.3 J	1.0 U
Aroclor-1254 (PCB-1254)	µg/L	0.09****	1.0 UJ	1.0 U	0.46 U	5.0 UJ	1.0 UJ	0.93 UJ	1.0 U
Aroclor-1260 (PCB-1260)	µg/L	0.09****	1.0 UJ	1.0 U	0.46 U	5.0 UJ	1.0 UJ	0.93 UJ	1.0 U

Notes:

- J - Estimated concentration.
- R - Rejected.
- U - Not detected at the associated reporting limit.
- UJ - Not detected; associated reporting limit is estimated.
- * - Standard applies to sum of 1,2-, 1,3-, and 1,4-dichlorobenzene
- ** - Standard applies to sum of cis- and trans-1,3-dichloropropene
- *** - Standard applies to total phenolic compounds
- **** - Standard applies to total PCBs
- 169000 - Parameter concentration exceeds associated groundwater standard.

Table 2

Groundwater Monitoring Program
Analytical Results Summary
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-8	MW-8	MW-8	MW-10	MW-10	MW-10	MW-12S
Sample ID:	NYSDEC	WG-080987-121715-BP-010	WG-080987-060716-BP-001	WG-080987-120516-BP-001	WG-080987-121815-BP-011	WG-080987-060716-BP-002	WG-080987-120516-BP-002	WG-080987-121815-BP-007	
Sample Date:	Class GA	12/17/2015	6/7/2016	12/5/2016	12/18/2015	6/7/2016	12/5/2016	12/18/2015	
Parameters	Groundwater Standards	Duplicate							
Units									
Volatile Organic Compounds									
1,1,1-Trichloroethane	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
1,1,2,2-Tetrachloroethane	ug/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
1,1,2-Trichloroethane	µg/L	1	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
1,1-Dichloroethane	µg/L	5	5.0 U	5.0 U	1.0 U	6.4	7.1	400 U	5.0 U
1,1-Dichloroethene	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
1,2,4-Trichlorobenzene	µg/L	5	5.0 U	5.0 U	1.0 U	1.1 J	1.3 J	400 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	0.04	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.0006	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
1,2-Dichlorobenzene	µg/L	3*	5.0 U	5.0 U	1.0 U	6.3	11	400 U	5.0 U
1,2-Dichloroethane	µg/L	0.6	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
1,2-Dichloropropane	µg/L	1	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
1,3-Dichlorobenzene	µg/L	3*	5.0 U	5.0 U	1.0 U	5.0 UJ	5.0 U	400 U	5.0 U
1,4-Dichlorobenzene	µg/L	3*	5.0 U	5.0 U	1.0 U	1.5 J	2.3 J	400 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L		5.0 U	5.0 U	10 U	5.0 U	5.0 U	4000 U	5.0 U
2-Hexanone	µg/L		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2000 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L		5.0 U	5.0 U	5.0 U	54 J	18	2000 U	5.0 U
Acetone	µg/L		5.0 U	5.0 U	10 U	160	85	4000 U	8.4
Benzene	µg/L	1	28	10	9.8	50 J	65	400 U	5.0 U
Bromodichloromethane	µg/L		5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
Bromoform	µg/L		5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
Carbon disulfide	µg/L	60	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
Carbon tetrachloride	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
Chlorobenzene	µg/L	5	5.0 U	5.0 U	1.0 U	69 J	110	400 U	5.0 U
Chloroethane	µg/L	5	5.0 U	5.0 U	1.0 UJ	5.0 U	5.0 U	400 UJ	5.0 U
Chloroform (Trichloromethane)	µg/L	7	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5	5.0 U	5.0 U	1.0 U	20 J	27	400 U	5.0 U
cis-1,3-Dichloropropene	µg/L	0.4**	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
Cyclohexane	µg/L		5.0 U	5.0 U	1.0 U	8.0 J	12	400 U	5.0 U
Dibromochloromethane	µg/L		5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5	5.0 U	5.0 U	1.0 UJ	5.0 U	5.0 U	400 UJ	5.0 U
Ethylbenzene	µg/L	5	5.0 U	1.2 J	1.0 U	740	2900	4300	5.0 U
Isopropyl benzene	µg/L	5	5.0 U	5.0 U	1.0 U	13	19	400 U	5.0 U
m&p-Xylenes	µg/L	5	31	5.2	-	1900	7500	-	5.0 U
Methyl acetate	µg/L		5.0 U	5.0 U	2.5 U	5.0 U	5.0 U	1000 U	5.0 U
Methyl cyclohexane	µg/L		5.0 U	5.0 U	1.0 U	1.3 J	1.7 J	400 U	5.0 U
Methyl tert butyl ether (MTBE)	µg/L		5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
Methylene chloride	µg/L	5	5.0 U	5.0 U	1.0 U	12	6.5	400 U	5.0 U
o-Xylene	µg/L	5	7.0	5.0 U	-	620	2400	-	5.0 U
Styrene	µg/L	5	5.0 U	5.0 U	1.0 U	77 J	120	400 U	5.0 U
Tetrachloroethene	µg/L	5	5.0 U	5.0 U	1.0 U	25	33	400 U	5.0 U
Toluene	µg/L	5	5.0 U	5.0 U	1.0 U	3200	12000	17000	5.0 U
trans-1,2-Dichloroethene	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
trans-1,3-Dichloropropene	µg/L	0.4**	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
Trichloroethene	µg/L	5	5.0 U	5.0 U	1.0 U	94 J	130	400 U	5.0 U
Trichlorofluoromethane (CFC-11)	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	5	5.0 U	5.0 U	1.0 U	5.0 U	5.0 U	400 U	5.0 U
Vinyl chloride	µg/L	2	5.0 U	5.0 U	1.0 UJ	7.3	6.7	400 UJ	5.0 U
Xylenes (total)	µg/L		38	5.2	2.0 U	2500	10000	16000	5.0 U

Table 2

Groundwater Monitoring Program
Analytical Results Summary
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-8	MW-8	MW-8	MW-10	MW-10	MW-10	MW-12S
Sample ID:			WG-080987-121715-BP-010	WG-080987-060716-BP-001	WG-080987-120516-BP-001	WG-080987-121815-BP-011	WG-080987-060716-BP-002	WG-080987-120516-BP-002	WG-080987-121815-BP-007
Sample Date:			12/17/2015	6/7/2016	12/5/2016	12/18/2015	6/7/2016	12/5/2016	12/18/2015
Parameters	Units	NYSDEC Class GA Groundwater Standards	Duplicate						
Semi-volatile Organic Compounds									
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	5	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
2,4,5-Trichlorophenol	µg/L	1***	20 U	20 U	4.6 U	2000 U	20 U	250 U	20 U
2,4,6-Trichlorophenol	µg/L	1***	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
2,4-Dichlorophenol	µg/L	5	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
2,4-Dimethylphenol	µg/L	1***	10 U	10 U	4.6 U	6000	760 J	7000	10 U
2,4-Dinitrophenol	µg/L	1***	20 U	20 U	9.1 U	2000 UJ	20 U	500 U	20 U
2,4-Dinitrotoluene	µg/L	5	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
2,6-Dinitrotoluene	µg/L	5	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
2-Chloronaphthalene	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
2-Chlorophenol	µg/L	1***	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
2-Methylnaphthalene	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
2-Methylphenol	µg/L	1***	10 U	10 U	4.6 U	3300	1600	3600 J	10 U
2-Nitroaniline	µg/L	5	20 U	20 U	9.1 U	2000 U	20 U	500 U	20 U
2-Nitrophenol	µg/L	1***	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
3,3'-Dichlorobenzidine	µg/L	5	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
3-Nitroaniline	µg/L	5	20 U	20 U	9.1 U	2000 U	20 U	500 U	20 U
4,6-Dinitro-2-methylphenol	µg/L	1***	20 U	20 U	9.1 U	2000 U	20 U	500 U	20 U
4-Bromophenyl phenyl ether	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
4-Chloro-3-methylphenol	µg/L	1***	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
4-Chloroaniline	µg/L	5	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
4-Chlorophenyl phenyl ether	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
4-Methylphenol	µg/L	1***	10 U	10 U	9.1 U	14000	6700	17000	10 U
4-Nitroaniline	µg/L	5	20 U	20 U	9.1 U	2000 U	20 U	500 U	20 U
4-Nitrophenol	µg/L	1***	20 U	20 U	9.1 U	2000 U	20 U	500 U	20 U
Acenaphthene	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Acenaphthylene	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Acetophenone	µg/L		10 U	10 U	4.6 U	1000 U	5.6 J	250 U	10 U
Anthracene	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Atrazine	µg/L	7.5	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Benzaldehyde	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Benzo(a)anthracene	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Benzo(a)pyrene	µg/L	ND	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Benzo(b)fluoranthene	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Benzo(g,h,i)perylene	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Benzo(k)fluoranthene	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Biphenyl (1,1-Biphenyl)	µg/L	5	10 U	10 U	4.6 U	1000 U	13	250 U	10 U
bis(2-Chloroethoxy)methane	µg/L	5	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
bis(2-Chloroethyl)ether	µg/L	1	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	5	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Butyl benzylphthalate (BBP)	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Caprolactam	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Carbazole	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Chrysene	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Dibenz(a,h)anthracene	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Dibenzofuran	µg/L		10 U	10 U	9.1 U	1000 U	10 U	500 U	10 U
Diethyl phthalate	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Dimethyl phthalate	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Di-n-butylphthalate (DBP)	µg/L	50	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Di-n-octyl phthalate (DnOP)	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Fluoranthene	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Fluorene	µg/L		10 U	10 U	4.6 U	1000 U	2.5 J	250 U	10 U
Hexachlorobenzene	µg/L	0.04	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Hexachlorobutadiene	µg/L	0.5	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Hexachlorocyclopentadiene	µg/L	5	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Hexachloroethane	µg/L	5	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Indeno(1,2,3-cd)pyrene	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U

Table 2

Groundwater Monitoring Program
Analytical Results Summary
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-8	MW-8	MW-8	MW-10	MW-10	MW-10	MW-12S
Sample ID:			WG-080987-121715-BP-010	WG-080987-060716-BP-001	WG-080987-120516-BP-001	WG-080987-121815-BP-011	WG-080987-060716-BP-002	WG-080987-120516-BP-002	WG-080987-121815-BP-007
Sample Date:			12/17/2015	6/7/2016	12/5/2016	12/18/2015	6/7/2016	12/5/2016	12/18/2015
Parameters	Units	NYSDEC Class GA Groundwater Standards	Duplicate						
Isophorone	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Naphthalene	µg/L		10 U	10 U	4.6 U	210 J	45	250 U	10 U
Nitrobenzene	µg/L	0.4	10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
N-Nitrosodi-n-propylamine	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
N-Nitrosodiphenylamine	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Pentachlorophenol	µg/L	1***	20 U	20 U	9.1 UJ	2000 UJ	46	500 U	20 U
Phenanthrene	µg/L		10 U	10 U	4.6 U	1000 U	3.1 J	250 U	10 U
Phenol	µg/L	1	10 U	10 U	4.6 U	14000	6500	22000	10 U
Pyrene	µg/L		10 U	10 U	4.6 U	1000 U	10 U	250 U	10 U
Metals									
Aluminum	µg/L		265 J	70.7 J	200 U	5430 J	3910	3900	1330 J
Antimony	µg/L	3	20 U	7.2 J	20 U	13.7 J	9.3 J	20 U	20 U
Arsenic	µg/L	25	20 U	16.0 J	16	95.7	62.9	84	20 U
Barium	µg/L	1000	112 J	128 J	130	413	294	280	245
Beryllium	µg/L		5.0 U	5.0 U	2 U	3.2 J	2.0 J	2.6	5.0 U
Cadmium	µg/L	5	5.0 U	1.0 J	2 U	4.5 J	1.6 J	3.8	5.0 U
Calcium	µg/L		54600	75400	86500	12500	8390	9300	61800
Chromium	µg/L	50	20 U	1.0 J	4 U	79.6	60.0	73	20 U
Cobalt	µg/L		50 U	50 U	4 U	18.2 J	11.8 J	15	5.7 J
Copper	µg/L	200	30 U	3.2 J	10 U	452	247	330	13.9 J
Iron	µg/L	300	7410	8900	9700	16700	12300	12700	5400
Lead	µg/L	25	10 U	9.1 J	10 U	269	166	230	6.3 J
Magnesium	µg/L		11900	17000	17500	1010	637	590	22300
Manganese	µg/L	300	6430	10500	11100	927	750	670	7180
Mercury	µg/L	0.7	0.20 UJ	0.20 U	0.2 U	0.80 J	0.38	0.78	0.20 UJ
Nickel	µg/L	100	9.0 J	6.2 J	10 U	194	124	150	13.9 J
Potassium	µg/L		4800	4910	5600	10500	9650	10200	3750
Selenium	µg/L	10	30.0 U	30 U	25 U	30.0 U	16.9 J	25 U	30.0 U
Silver	µg/L	50	30 U	30 U	6 U	30 U	30 U	6 U	30 U
Sodium	µg/L	20000	429000	323000	240000	1720000	1360000	1200000	83500
Thallium	µg/L		20 U	20 U	20 U	20 U	20 U	20 U	20 U
Vanadium	µg/L		50 U	50 U	5 U	348	267	300	50 U
Zinc	µg/L		50 U	50 U	10 U	79.4	62.1	61	51.1
PCBs									
Aroclor-1016 (PCB-1016)	µg/L	0.09****	1.0 U	2.4 J	0.46 U	10 UJ	39 J	13 U	1.0 U
Aroclor-1221 (PCB-1221)	µg/L	0.09****	1.0 U	1.0 U	0.46 U	10 UJ	10 U	13 U	1.0 U
Aroclor-1232 (PCB-1232)	µg/L	0.09****	1.0 U	1.0 U	5.6 J	10 UJ	10 U	13 U	1.0 U
Aroclor-1242 (PCB-1242)	µg/L	0.09****	1.0 U	1.0 U	0.46 U	96 R	10 U	130	1.0 U
Aroclor-1248 (PCB-1248)	µg/L	0.09****	1.0 U	1.0 U	0.46 U	10 UJ	10 U	13 U	1.0 U
Aroclor-1254 (PCB-1254)	µg/L	0.09****	1.0 U	1.0 U	0.46 U	10 UJ	10 U	13 U	1.0 U
Aroclor-1260 (PCB-1260)	µg/L	0.09****	1.0 U	1.0 U	0.46 U	10 UJ	10 U	13 U	1.0 U

Notes:

J - Estimated concentration.

R - Rejected.

U - Not detected at the associated reporting limit.

UJ - Not detected; associated reporting limit is estimated.

* - Standard applies to sum of 1,2-, 1,3-, and 1,4-dichlorobenzene

** - Standard applies to sum of cis- and trans-1,3-dichloropropene

*** - Standard applies to total phenolic compounds

**** - Standard applies to total PCBs

169000 Parameter concentration exceeds associated groundwater standard.

Table 2

Groundwater Monitoring Program Analytical Results Summary Friedrichsohn Cooperage Site Waterford, New York							
Sample Location:		MW-12S	MW-12S	MW-13S	MW-13S	MW-13S	
Sample ID:	NYSDEC	WG-080987-060916-BP-012	WG-080987-120616-BP-011	WG-080987-121815-BP-008	WG-080987-060916-BP-011	WG-080987-120616-BP-010	
Sample Date:	Class GA	6/9/2016	12/6/2016	12/18/2015	6/9/2016	12/6/2016	
Parameters	Units	Groundwater Standards					
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	1	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
1,1-Dichloroethane	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
1,1-Dichloroethene	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	0.04	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.0006	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	3*	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
1,2-Dichloroethane	µg/L	0.6	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
1,2-Dichloropropane	µg/L	1	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	3*	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	3*	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L		5.0 U	10 U	5.0 U	5.0 U	10 U
2-Hexanone	µg/L		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	µg/L		5.0 U	10 U	8.0	5.0 U	10 U
Benzene	µg/L	1	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Bromodichloromethane	µg/L		5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Bromoform	µg/L		5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Carbon disulfide	µg/L	60	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Carbon tetrachloride	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Chlorobenzene	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Chloroethane	µg/L	5	5.0 U	1.0 UJ	5.0 U	5.0 U	1.0 UJ
Chloroform (Trichloromethane)	µg/L	7	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	0.4**	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Cyclohexane	µg/L		5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Dibromochloromethane	µg/L		5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5	5.0 U	1.0 UJ	5.0 U	5.0 U	1.0 UJ
Ethylbenzene	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Isopropyl benzene	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
m&p-Xylenes	µg/L	5	5.0 U	-	5.0 U	5.0 U	-
Methyl acetate	µg/L		5.0 U	2.5 U	5.0 U	5.0 U	2.5 U
Methyl cyclohexane	µg/L		5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L		5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Methylene chloride	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
o-Xylene	µg/L	5	5.0 U	-	5.0 U	5.0 U	-
Styrene	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Tetrachloroethene	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Toluene	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	0.4**	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Trichloroethene	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	5	5.0 U	1.0 U	5.0 U	5.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	5	5.0 UJ	1.0 U	5.0 U	5.0 UJ	1.0 U
Vinyl chloride	µg/L	2	5.0 U	1.0 UJ	5.0 U	5.0 U	1.0 UJ
Xylenes (total)	µg/L		5.0 U	2.0 U	5.0 U	5.0 U	2.0 U

Table 2

Groundwater Monitoring Program Analytical Results Summary Friedrichsohn Cooperage Site Waterford, New York						
Sample Location:		MW-12S	MW-12S	MW-13S	MW-13S	MW-13S
Sample ID:	NYSDEC	WG-080987-060916-BP-012	WG-080987-120616-BP-011	WG-080987-121815-BP-008	WG-080987-060916-BP-011	WG-080987-120616-BP-010
Sample Date:	Class GA	6/9/2016	12/6/2016	12/18/2015	6/9/2016	12/6/2016
Parameters	Groundwater					
	Units	Standards				
Semi-volatile Organic Compounds						
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	5	10 U	4.7 U	10 U	4.7 U
2,4,5-Trichlorophenol	µg/L	1***	20 U	4.7 U	20 U	4.7 U
2,4,6-Trichlorophenol	µg/L	1***	10 U	4.7 U	10 U	4.7 U
2,4-Dichlorophenol	µg/L	5	10 U	4.7 U	10 U	4.7 U
2,4-Dimethylphenol	µg/L	1***	10 U	4.7 U	10 U	4.7 U
2,4-Dinitrophenol	µg/L	1***	20 U	9.3 U	20 U	9.3 U
2,4-Dinitrotoluene	µg/L	5	10 U	4.7 U	10 U	4.7 U
2,6-Dinitrotoluene	µg/L	5	10 U	4.7 U	10 U	4.7 U
2-Chloronaphthalene	µg/L		10 U	4.7 U	10 U	4.7 U
2-Chlorophenol	µg/L	1***	10 U	4.7 U	10 U	4.7 U
2-Methylnaphthalene	µg/L		10 U	4.7 U	10 U	4.7 U
2-Methylphenol	µg/L	1***	10 U	4.7 U	10 U	4.7 U
2-Nitroaniline	µg/L	5	20 U	9.3 U	20 U	9.3 U
2-Nitrophenol	µg/L	1***	10 U	4.7 U	10 U	4.7 U
3,3'-Dichlorobenzidine	µg/L	5	10 U	4.7 U	10 U	4.7 U
3-Nitroaniline	µg/L	5	20 U	9.3 U	20 U	9.3 U
4,6-Dinitro-2-methylphenol	µg/L	1***	20 U	9.3 U	20 U	9.3 U
4-Bromophenyl phenyl ether	µg/L		10 U	4.7 U	10 U	4.7 U
4-Chloro-3-methylphenol	µg/L	1***	10 U	4.7 U	10 U	4.7 U
4-Chloroaniline	µg/L	5	10 U	4.7 U	10 U	4.7 U
4-Chlorophenyl phenyl ether	µg/L		10 U	4.7 U	10 U	4.7 U
4-Methylphenol	µg/L	1***	10 U	9.3 U	10 U	9.3 U
4-Nitroaniline	µg/L	5	20 U	9.3 U	20 U	9.3 U
4-Nitrophenol	µg/L	1***	20 U	9.3 U	20 U	9.3 U
Acenaphthene	µg/L		10 U	4.7 U	10 U	4.7 U
Acenaphthylene	µg/L		10 U	4.7 U	10 U	4.7 U
Acetophenone	µg/L		10 U	4.7 U	10 U	4.7 U
Anthracene	µg/L		10 U	4.7 U	10 U	4.7 U
Atrazine	µg/L	7.5	10 U	4.7 U	10 U	4.7 U
Benzaldehyde	µg/L		10 U	4.7 U	10 U	4.7 U
Benzo(a)anthracene	µg/L		10 U	4.7 U	10 U	4.7 U
Benzo(a)pyrene	µg/L	ND	10 U	4.7 U	10 U	4.7 U
Benzo(b)fluoranthene	µg/L		10 U	4.7 U	10 U	4.7 U
Benzo(g,h,i)perylene	µg/L		10 U	4.7 U	10 U	4.7 U
Benzo(k)fluoranthene	µg/L		10 U	4.7 U	10 U	4.7 U
Biphenyl (1,1-Biphenyl)	µg/L	5	10 U	4.7 U	10 U	4.7 U
bis(2-Chloroethoxy)methane	µg/L	5	10 U	4.7 U	10 U	4.7 U
bis(2-Chloroethyl)ether	µg/L	1	10 U	4.7 U	10 U	4.7 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	5	10 U	4.7 U	10 U	4.7 U
Butyl benzylphthalate (BBP)	µg/L		10 U	4.7 U	10 U	4.7 U
Caprolactam	µg/L		10 U	4.7 U	10 U	4.7 U
Carbazole	µg/L		10 U	4.7 U	10 U	4.7 U
Chrysene	µg/L		10 U	4.7 U	10 U	4.7 U
Dibenz(a,h)anthracene	µg/L		10 U	4.7 U	10 U	4.7 U
Dibenzofuran	µg/L		10 U	9.3 U	10 U	9.3 U
Diethyl phthalate	µg/L		10 U	4.7 U	10 U	4.7 U
Dimethyl phthalate	µg/L		10 U	4.7 U	10 U	4.7 U
Di-n-butylphthalate (DBP)	µg/L	50	10 U	4.7 U	10 U	4.7 U
Di-n-octyl phthalate (DnOP)	µg/L		10 U	4.7 U	10 U	4.7 U
Fluoranthene	µg/L		10 U	4.7 U	10 U	4.7 U
Fluorene	µg/L		10 U	4.7 U	10 U	4.7 U
Hexachlorobenzene	µg/L	0.04	10 U	4.7 U	10 U	4.7 U
Hexachlorobutadiene	µg/L	0.5	10 U	4.7 U	10 U	4.7 U
Hexachlorocyclopentadiene	µg/L	5	10 U	4.7 U	10 U	4.7 U
Hexachloroethane	µg/L	5	10 U	4.7 U	10 U	4.7 U
Indeno(1,2,3-cd)pyrene	µg/L		10 U	4.7 U	10 U	4.7 U

Table 2

Groundwater Monitoring Program
Analytical Results Summary
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-12S	MW-12S	MW-13S	MW-13S	MW-13S
Sample ID:		NYSDEC	WG-080987-060916-BP-012	WG-080987-120616-BP-011	WG-080987-121815-BP-008	WG-080987-060916-BP-011	WG-080987-120616-BP-010
Sample Date:		Class GA	6/9/2016	12/6/2016	12/18/2015	6/9/2016	12/6/2016
		Groundwater					
Parameters	Units	Standards					
Isophorone	µg/L		10 U	4.7 U	10 U	10 U	4.7 U
Naphthalene	µg/L		10 U	4.7 U	10 U	10 U	4.7 U
Nitrobenzene	µg/L	0.4	10 U	4.7 U	10 U	10 U	4.7 U
N-Nitrosodi-n-propylamine	µg/L		10 U	4.7 U	10 U	10 U	4.7 U
N-Nitrosodiphenylamine	µg/L		10 U	4.7 U	10 U	10 U	4.7 U
Pentachlorophenol	µg/L	1***	20 U	9.3 U	20 U	20 U	9.3 U
Phenanthrene	µg/L		10 U	4.7 U	10 U	10 U	4.7 U
Phenol	µg/L	1	10 U	4.7 U	10 U	10 U	4.7 U
Pyrene	µg/L		10 U	4.7 U	10 U	10 U	4.7 U
Metals							
Aluminum	µg/L		261	260	511 J	200 U	230
Antimony	µg/L	3	20 U	20 U	20 U	6.2 J	20 U
Arsenic	µg/L	25	20 U	15 U	20 U	9.6 J	15 U
Barium	µg/L	1000	179 J	160	223	173 J	160
Beryllium	µg/L		5.0 U	2 U	5.0 U	5.0 U	2 U
Cadmium	µg/L	5	5.0 U	2 U	5.0 U	5.0 U	2 U
Calcium	µg/L		45600	44100	51400	54800	51800
Chromium	µg/L	50	1.2 J	4 U	1.0 J	0.93 J	4 U
Cobalt	µg/L		50 U	4 U	50 U	50 U	4 U
Copper	µg/L	200	4.4 J	10 U	7.9 J	5.5 J	10 U
Iron	µg/L	300	3110	2300	1770	2060	2300
Lead	µg/L	25	6.2 J	10 U	4.7 J	10 U	10 U
Magnesium	µg/L		12600	12200	15500	20300	19200
Manganese	µg/L	300	811	650	495	6730	5900
Mercury	µg/L	0.7	0.20 U	0.2 U	0.20 UJ	0.20 U	0.2 U
Nickel	µg/L	100	4.4 J	10 U	50 U	9.2 J	10 U
Potassium	µg/L		3430	3500	4360	3430	3600
Selenium	µg/L	10	30 U	25 U	30.0 U	30 U	25 U
Silver	µg/L	50	30 U	6 U	30 U	30 U	6 U
Sodium	µg/L	20000	80400	76100	118000	80600	83100
Thallium	µg/L		20 U	20 U	20 U	20 U	20 U
Vanadium	µg/L		50 U	5 U	50 U	50 U	5 U
Zinc	µg/L		50 U	15	50 U	26.5 J	10 U
PCBs							
Aroclor-1016 (PCB-1016)	µg/L	0.09****	1.0 U	0.47 U	1.0 U	1.0 U	0.47 U
Aroclor-1221 (PCB-1221)	µg/L	0.09****	1.0 U	0.47 U	1.0 U	1.0 U	0.47 U
Aroclor-1232 (PCB-1232)	µg/L	0.09****	1.0 U	0.47 U	1.0 U	1.0 U	0.47 U
Aroclor-1242 (PCB-1242)	µg/L	0.09****	1.0 U	0.47 U	1.0 U	1.0 U	0.47 U
Aroclor-1248 (PCB-1248)	µg/L	0.09****	1.0 U	0.47 U	1.0 U	1.0 U	0.47 U
Aroclor-1254 (PCB-1254)	µg/L	0.09****	1.0 U	0.47 U	1.0 U	1.0 UJ	0.47 U
Aroclor-1260 (PCB-1260)	µg/L	0.09****	1.0 U	0.47 U	1.0 U	1.0 UJ	0.47 U

Notes:

- J - Estimated concentration.
- R - Rejected.
- U - Not detected at the associated reporting limit.
- UJ - Not detected; associated reporting limit is estimated.
- * - Standard applies to sum of 1,2-, 1,3-, and 1,4-dichlorobenzene
- ** - Standard applies to sum of cis- and trans-1,3-dichloropropene
- *** - Standard applies to total phenolic compounds
- **** - Standard applies to total PCBs

169000 Parameter concentration exceeds associated groundwater standard.

Attachment A

Attachment A

**Well Purge Record
Friedrichsohn Cooperage Site
Waterford, New York**

Well ID	Sample ID	Elapsed Time (min)	Depth to Water (ft BTOR)	Drawdown (ft)	pH	Conductivity (ms/cm)	Temperature (° C)	ORP (mV)	Turbidity (NTUs)
MW-2	WG-080987-120616-BP-009	0	7.39	0.00	7.89	1.32	13.66	86	797
		5	7.59	0.20	7.89	1.32	13.81	73	797
		10	7.81	0.42	7.91	1.29	13.87	59	663
		15	7.99	0.60	7.95	1.25	13.99	46	574
		20	8.20	0.81	7.97	1.23	13.99	36	491
		25	8.40	1.01	7.98	1.22	14.01	29	426
		30	8.69	1.30	7.98	1.21	14.04	20	250
		35	8.92	1.53	7.99	1.21	14.04	17	190
		40	9.12	1.73	7.99	1.22	14.06	15	96
		45	9.16	1.77	8.00	1.20	14.04	14	47
MW-2S	WG-080987-120616-BP-008	0	5.14	0.00	10.77	1.37	8.98	19	284
		5	5.24	0.10	9.85	1.34	10.62	37	147
		10	5.39	0.25	9.48	1.34	11.20	50	111
		15	5.70	0.56	9.25	1.33	11.40	60	81
		20	5.91	0.77	9.13	1.32	11.55	67	62
		25	6.06	0.92	9.06	1.31	11.53	72	54
		30	6.40	1.26	9.00	1.30	11.66	76	46
		35	6.55	1.41	8.92	1.30	11.67	80	35
		40	6.70	1.56	8.93	1.30	11.66	82	34
MW-5	WG-080987-120516-BP-005	0	3.02	0.00	6.89	0.82	11.65	-27	277
		5	3.14	0.12	6.81	1.31	11.80	-21	200
		10	3.29	0.27	6.71	1.30	11.82	-11	134
		15	3.39	0.37	6.68	1.28	11.85	-7	102
		20	3.57	0.55	6.66	1.27	11.86	-5	137
		25	3.71	0.69	6.64	1.26	11.86	-5	80
		30	3.83	0.81	6.63	1.26	11.85	-4	70
		35	3.96	0.94	6.62	1.27	11.83	-2	44
		40	4.17	1.15	6.62	1.27	11.82	-3	32

Attachment A

**Well Purge Record
Friedrichsohn Cooperage Site
Waterford, New York**

Well ID	Sample ID	Elapsed Time (min)	Depth to Water (ft BTOR)	Drawdown (ft)	pH	Conductivity (ms/cm)	Temperature (° C)	ORP (mV)	Turbidity (NTUs)
MW-5S	WG-080987-120516-BP-006/007	0	10.51	0.00	7.71	0.820	11.41	-116	83
		5	10.54	0.03	7.11	0.813	13.34	-117	61
		10	10.59	0.08	7.08	0.813	13.61	-109	41
		15	10.63	0.12	7.05	0.812	13.66	-103	33
		20	10.67	0.16	7.04	0.811	13.74	-99	26
		25	10.74	0.23	7.03	0.809	13.69	-96	21
		30	10.75	0.24	7.02	0.807	13.72	-93	19
		35	10.81	0.30	7.01	0.804	13.71	-90	16
		40	10.90	0.39	7.01	0.803	13.73	-90	16
MW-6	WG-080987-120516-BP-003	0	6.37	0.00	9.71	0.626	11.68	-31	42
		5	6.55	0.18	9.89	0.597	11.88	-52	21
		10	6.62	0.25	9.91	0.590	11.87	-63	17
		15	6.79	0.42	9.92	0.587	11.87	-65	15
		20	6.88	0.51	9.93	0.585	11.90	-63	14
		25	6.99	0.62	9.94	0.583	11.92	-60	13
		30	7.07	0.70	9.95	0.582	11.97	-60	12
		35	7.14	0.77	9.94	0.583	11.95	-58	9
		40	7.20	0.83	9.94	0.584	11.94	-58	10
		45	7.22	0.85	9.93	0.584	11.95	-56	9
MW-6S	WG-080987-120516-BP-004	0	5.49	0.00	9.08	1.52	12.26	-170	98
		5	5.52	0.03	9.34	2.43	12.95	-229	73
		10	5.56	0.07	9.35	2.32	12.97	-247	52
		15	5.61	0.12	9.35	2.27	13.02	-257	44
		20	5.70	0.21	9.36	2.24	13.03	-266	36
		25	5.79	0.30	9.36	2.22	13.09	-273	26
		30	5.88	0.39	9.38	2.20	13.05	-280	20
		35	5.93	0.44	9.38	2.19	13.07	-285	22
		40	6.10	0.61	9.37	2.18	13.11	-287	18

Attachment A

**Well Purge Record
Friedrichsohn Cooperage Site
Waterford, New York**

Well ID	Sample ID	Elapsed Time (min)	Depth to Water (ft BTOR)	Drawdown (ft)	pH	Conductivity (ms/cm)	Temperature (° C)	ORP (mV)	Turbidity (NTUs)
MW-8	WG-080987-120516-BP-001	0	6.95	0.00	6.74	0.445	10.88	115	73
		5	7.00	0.05	6.94	1.43	12.08	-73	37
		10	7.07	0.12	6.94	1.10	12.30	-86	32
		15	7.09	0.14	6.95	1.53	12.34	-95	25
		20	7.19	0.24	6.96	1.56	12.39	-102	14
		25	7.23	0.28	6.97	1.58	12.48	-106	9
		30	7.30	0.35	6.98	1.59	12.49	-111	11
		35	7.36	0.41	6.97	1.59	12.50	-112	8
		40	7.41	0.46	6.97	1.59	12.58	-113	7
MW-10	WG-080987-120516-BP-002	0	5.72	0.00	9.97	1.26	11.10	-186	90
		5	5.75	0.03	10.08	5.37	12.77	-239	403
		10	5.79	0.07	10.10	5.45	13.19	-276	426
		15	5.82	0.10	10.08	5.47	13.31	-290	331
		20	5.91	0.19	10.07	5.48	13.37	-303	281
		25	5.96	0.24	10.06	5.47	13.29	-313	211
		30	6.03	0.31	10.07	5.50	13.37	-321	188
		35	6.07	0.35	10.07	5.53	13.40	-327	179
		40	6.09	0.37	10.07	5.53	13.42	-330	182
MW-12S	WG-080987-120616-BP-011	0	16.62	0.00	6.67	2.55	13.36	-308	119
		5	16.90	0.28	6.60	2.79	13.96	-211	82
		10	17.09	0.47	6.50	2.81	14.04	-146	90
		15	17.20	0.58	6.43	2.83	14.11	-120	74
		20	17.34	0.72	6.33	2.84	14.14	-109	70
		25	17.58	0.96	6.32	2.86	14.20	-100	83
		30	17.64	1.02	6.32	2.89	14.21	-92	80
		35	17.71	1.09	6.31	2.89	14.22	-93	74
		40	17.89	1.27	6.31	2.89	14.22	-90	71

Attachment A

**Well Purge Record
Friedrichsohn Cooperage Site
Waterford, New York**

Well ID	Sample ID	Elapsed Time (min)	Depth to Water (ft BTOR)	Drawdown (ft)	pH	Conductivity (ms/cm)	Temperature (° C)	ORP (mV)	Turbidity (NTUs)
MW-13S	WG-080987-120616-BP-010	0	21.61	0.00	6.79	2.20	13.76	-290	199
		5	21.79	0.18	6.78	2.39	14.03	-204	76
		10	21.94	0.33	6.76	2.51	14.05	-162	49
		15	22.09	0.48	6.76	2.59	14.09	-140	55
		20	22.19	0.58	6.75	2.77	14.12	-120	62
		25	22.29	0.68	6.74	2.83	14.14	-119	70
		30	22.42	0.81	6.72	2.90	14.11	-124	51
		35	22.56	0.95	6.71	2.92	14.11	-122	44
		40	22.74	1.13	6.70	2.95	14.11	-119	49

Attachment B

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperaage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-001

Lab Sample ID: 480-110656-1

Date Collected: 12/05/16 10:40

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			12/08/16 11:32	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			12/08/16 11:32	1
1,1,2-Trichloroethane	ND		1.0		ug/L			12/08/16 11:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			12/08/16 11:32	1
1,1-Dichloroethane	ND		1.0		ug/L			12/08/16 11:32	1
1,1-Dichloroethene	ND		1.0		ug/L			12/08/16 11:32	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			12/08/16 11:32	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			12/08/16 11:32	1
1,2-Dichlorobenzene	ND		1.0		ug/L			12/08/16 11:32	1
1,2-Dichloroethane	ND		1.0		ug/L			12/08/16 11:32	1
1,2-Dichloropropane	ND		1.0		ug/L			12/08/16 11:32	1
1,3-Dichlorobenzene	ND		1.0		ug/L			12/08/16 11:32	1
1,4-Dichlorobenzene	ND		1.0		ug/L			12/08/16 11:32	1
2-Butanone (MEK)	ND		10		ug/L			12/08/16 11:32	1
2-Hexanone	ND		5.0		ug/L			12/08/16 11:32	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			12/08/16 11:32	1
Acetone	ND		10		ug/L			12/08/16 11:32	1
Benzene	9.8		1.0		ug/L			12/08/16 11:32	1
Bromodichloromethane	ND		1.0		ug/L			12/08/16 11:32	1
Bromoform	ND		1.0		ug/L			12/08/16 11:32	1
Bromomethane	ND		1.0		ug/L			12/08/16 11:32	1
Carbon disulfide	ND		1.0		ug/L			12/08/16 11:32	1
Carbon tetrachloride	ND		1.0		ug/L			12/08/16 11:32	1
Chlorobenzene	ND		1.0		ug/L			12/08/16 11:32	1
Dibromochloromethane	ND		1.0		ug/L			12/08/16 11:32	1
Chloroethane	ND		1.0		ug/L			12/08/16 11:32	1
Chloroform	ND		1.0		ug/L			12/08/16 11:32	1
Chloromethane	ND		1.0		ug/L			12/08/16 11:32	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			12/08/16 11:32	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 11:32	1
Cyclohexane	ND		1.0		ug/L			12/08/16 11:32	1
Dichlorodifluoromethane	ND		1.0		ug/L			12/08/16 11:32	1
Ethylbenzene	ND		1.0		ug/L			12/08/16 11:32	1
1,2-Dibromoethane	ND		1.0		ug/L			12/08/16 11:32	1
Isopropylbenzene	ND		1.0		ug/L			12/08/16 11:32	1
Methyl acetate	ND		2.5		ug/L			12/08/16 11:32	1
Methyl tert-butyl ether	ND		1.0		ug/L			12/08/16 11:32	1
Methylcyclohexane	ND		1.0		ug/L			12/08/16 11:32	1
Methylene Chloride	ND		1.0		ug/L			12/08/16 11:32	1
Styrene	ND		1.0		ug/L			12/08/16 11:32	1
Tetrachloroethene	ND		1.0		ug/L			12/08/16 11:32	1
Toluene	ND		1.0		ug/L			12/08/16 11:32	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			12/08/16 11:32	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 11:32	1
Trichloroethene	ND		1.0		ug/L			12/08/16 11:32	1
Trichlorofluoromethane	ND		1.0		ug/L			12/08/16 11:32	1
Vinyl chloride	ND		1.0		ug/L			12/08/16 11:32	1
Xylenes, Total	ND		2.0		ug/L			12/08/16 11:32	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-001

Lab Sample ID: 480-110656-1

Date Collected: 12/05/16 10:40

Matrix: Water

Date Received: 12/07/16 09:30

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Silanol, trimethyl-	55	T J N	ug/L		4.55	1066-40-6		12/08/16 11:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120					12/08/16 11:32	1
1,2-Dichloroethane-d4 (Surr)	100		77 - 120					12/08/16 11:32	1
4-Bromofluorobenzene (Surr)	91		73 - 120					12/08/16 11:32	1
Dibromofluoromethane (Surr)	102		75 - 123					12/08/16 11:32	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
2,4,6-Trichlorophenol	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
2,4-Dichlorophenol	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
2,4-Dimethylphenol	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
2,4-Dinitrophenol	ND		9.1		ug/L		12/09/16 06:12	12/14/16 22:44	1
2,4-Dinitrotoluene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
2,6-Dinitrotoluene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
2-Chloronaphthalene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
2-Chlorophenol	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
2-Methylnaphthalene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
2-Methylphenol	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
2-Nitroaniline	ND		9.1		ug/L		12/09/16 06:12	12/14/16 22:44	1
2-Nitrophenol	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
3,3'-Dichlorobenzidine	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
3-Nitroaniline	ND		9.1		ug/L		12/09/16 06:12	12/14/16 22:44	1
4,6-Dinitro-2-methylphenol	ND		9.1		ug/L		12/09/16 06:12	12/14/16 22:44	1
4-Bromophenyl phenyl ether	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
4-Chloro-3-methylphenol	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
4-Chloroaniline	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
4-Chlorophenyl phenyl ether	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
4-Methylphenol	ND		9.1		ug/L		12/09/16 06:12	12/14/16 22:44	1
4-Nitroaniline	ND		9.1		ug/L		12/09/16 06:12	12/14/16 22:44	1
4-Nitrophenol	ND		9.1		ug/L		12/09/16 06:12	12/14/16 22:44	1
Acenaphthene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Acenaphthylene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Acetophenone	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Anthracene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Atrazine	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Benzaldehyde	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Benzo[a]anthracene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Benzo[a]pyrene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Benzo[b]fluoranthene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Benzo[g,h,i]perylene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Benzo[k]fluoranthene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Biphenyl	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
bis (2-chloroisopropyl) ether	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Bis(2-chloroethoxy)methane	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Bis(2-chloroethyl)ether	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Bis(2-ethylhexyl) phthalate	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Butyl benzyl phthalate	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-001

Lab Sample ID: 480-110656-1

Date Collected: 12/05/16 10:40

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Caprolactam	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Carbazole	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Chrysene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Dibenz(a,h)anthracene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Dibenzofuran	ND		9.1		ug/L		12/09/16 06:12	12/14/16 22:44	1
Diethyl phthalate	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Dimethyl phthalate	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Di-n-butyl phthalate	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Di-n-octyl phthalate	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Fluoranthene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Fluorene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Hexachlorobenzene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Hexachlorobutadiene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Hexachlorocyclopentadiene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Hexachloroethane	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Indeno[1,2,3-cd]pyrene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Isophorone	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Naphthalene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Nitrobenzene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
N-Nitrosodi-n-propylamine	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
N-Nitrosodiphenylamine	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Pentachlorophenol	ND		9.1		ug/L		12/09/16 06:12	12/14/16 22:44	1
Phenanthrene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Phenol	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1
Pyrene	ND		4.6		ug/L		12/09/16 06:12	12/14/16 22:44	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	76	T J	ug/L		2.51		12/09/16 06:12	12/14/16 22:44	1
Unknown	3.4	T J	ug/L		2.56		12/09/16 06:12	12/14/16 22:44	1
Toluene	4.1	T J N	ug/L		3.51	108-88-3	12/09/16 06:12	12/14/16 22:44	1
Unknown	53	T J	ug/L		4.35		12/09/16 06:12	12/14/16 22:44	1
Unknown	4.1	T J	ug/L		4.57		12/09/16 06:12	12/14/16 22:44	1
Unknown	3.9	T J	ug/L		5.61		12/09/16 06:12	12/14/16 22:44	1
Cyclopentasiloxane, decamethyl-	3.4	T J N	ug/L		6.59	541-02-6	12/09/16 06:12	12/14/16 22:44	1
Phenol, p-tert-butyl-	13	T J N	ug/L		7.45	98-54-4	12/09/16 06:12	12/14/16 22:44	1
Unknown	11	T J	ug/L		8.83		12/09/16 06:12	12/14/16 22:44	1
Benzenesulfonamide, 2-methyl-	2.2	T J N	ug/L		8.95	88-19-7	12/09/16 06:12	12/14/16 22:44	1
Unknown	2.3	T J	ug/L		9.09		12/09/16 06:12	12/14/16 22:44	1
Unknown	4.6	T J	ug/L		9.83		12/09/16 06:12	12/14/16 22:44	1
Benzoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-	2.7	T J N	ug/L		9.90	1421-49-4	12/09/16 06:12	12/14/16 22:44	1
Unknown	5.4	T J	ug/L		10.06		12/09/16 06:12	12/14/16 22:44	1
n-Hexadecanoic acid	14	T J N	ug/L		10.10	57-10-3	12/09/16 06:12	12/14/16 22:44	1
Octadecanoic acid	7.8	T J N	ug/L		10.74	57-11-4	12/09/16 06:12	12/14/16 22:44	1
Ethanol, 2-[2-[4-(1,1,3,3-tetramethylbutyl)phenoxy]ethoxy]-	4.6	T J N	ug/L		10.77	2315-61-9	12/09/16 06:12	12/14/16 22:44	1
Phenol, 4,4'-(1-methylethylidene)bis-	5.0	T J N	ug/L		10.86	80-05-7	12/09/16 06:12	12/14/16 22:44	1
Unknown	2.1	T J	ug/L		12.75		12/09/16 06:12	12/14/16 22:44	1
Unknown	3.4	T J	ug/L		17.64		12/09/16 06:12	12/14/16 22:44	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-001

Lab Sample ID: 480-110656-1

Date Collected: 12/05/16 10:40

Matrix: Water

Date Received: 12/07/16 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	109		52 - 132	12/09/16 06:12	12/14/16 22:44	1
2-Fluorobiphenyl	85		48 - 120	12/09/16 06:12	12/14/16 22:44	1
2-Fluorophenol (Surr)	66		20 - 120	12/09/16 06:12	12/14/16 22:44	1
Nitrobenzene-d5 (Surr)	83		46 - 120	12/09/16 06:12	12/14/16 22:44	1
Phenol-d5 (Surr)	50		16 - 120	12/09/16 06:12	12/14/16 22:44	1
p-Terphenyl-d14 (Surr)	96		67 - 150	12/09/16 06:12	12/14/16 22:44	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.46		ug/L		12/08/16 06:26	12/09/16 06:05	1
PCB-1221	ND		0.46		ug/L		12/08/16 06:26	12/09/16 06:05	1
PCB-1232	5.6		0.46		ug/L		12/08/16 06:26	12/09/16 06:05	1
PCB-1242	ND		0.46		ug/L		12/08/16 06:26	12/09/16 06:05	1
PCB-1248	ND		0.46		ug/L		12/08/16 06:26	12/09/16 06:05	1
PCB-1254	ND		0.46		ug/L		12/08/16 06:26	12/09/16 06:05	1
PCB-1260	ND		0.46		ug/L		12/08/16 06:26	12/09/16 06:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	84		19 - 120	12/08/16 06:26	12/09/16 06:05	1
DCB Decachlorobiphenyl	91		19 - 120	12/08/16 06:26	12/09/16 06:05	1
Tetrachloro-m-xylene	122	X	39 - 121	12/08/16 06:26	12/09/16 06:05	1
Tetrachloro-m-xylene	77		39 - 121	12/08/16 06:26	12/09/16 06:05	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20		mg/L		12/08/16 11:30	12/09/16 16:26	1
Antimony	ND		0.020		mg/L		12/08/16 11:30	12/09/16 16:26	1
Arsenic	0.016		0.015		mg/L		12/08/16 11:30	12/09/16 16:26	1
Barium	0.13		0.0020		mg/L		12/08/16 11:30	12/09/16 16:26	1
Beryllium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 16:26	1
Cadmium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 16:26	1
Calcium	86.5		0.50		mg/L		12/08/16 11:30	12/09/16 16:26	1
Chromium	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 16:26	1
Cobalt	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 16:26	1
Copper	ND		0.010		mg/L		12/08/16 11:30	12/09/16 16:26	1
Iron	9.7		0.050		mg/L		12/08/16 11:30	12/09/16 16:26	1
Lead	ND		0.010		mg/L		12/08/16 11:30	12/09/16 16:26	1
Magnesium	17.5		0.20		mg/L		12/08/16 11:30	12/09/16 16:26	1
Manganese	11.1		0.0030		mg/L		12/08/16 11:30	12/09/16 16:26	1
Nickel	ND		0.010		mg/L		12/08/16 11:30	12/09/16 16:26	1
Potassium	5.6		0.50		mg/L		12/08/16 11:30	12/09/16 16:26	1
Selenium	ND		0.025		mg/L		12/08/16 11:30	12/09/16 16:26	1
Silver	ND		0.0060		mg/L		12/08/16 11:30	12/09/16 16:26	1
Sodium	240		1.0		mg/L		12/08/16 11:30	12/09/16 16:26	1
Thallium	ND		0.020		mg/L		12/08/16 11:30	12/09/16 16:26	1
Vanadium	ND		0.0050		mg/L		12/08/16 11:30	12/09/16 16:26	1
Zinc	ND		0.010		mg/L		12/08/16 11:30	12/09/16 16:26	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		12/09/16 08:25	12/09/16 13:42	1

TestAmerica Buffalo

MW-10

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-002

Lab Sample ID: 480-110656-2

Date Collected: 12/05/16 11:45

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		400		ug/L			12/08/16 11:56	400
1,1,2,2-Tetrachloroethane	ND		400		ug/L			12/08/16 11:56	400
1,1,2-Trichloroethane	ND		400		ug/L			12/08/16 11:56	400
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		400		ug/L			12/08/16 11:56	400
1,1-Dichloroethane	ND		400		ug/L			12/08/16 11:56	400
1,1-Dichloroethene	ND		400		ug/L			12/08/16 11:56	400
1,2,4-Trichlorobenzene	ND		400		ug/L			12/08/16 11:56	400
1,2-Dibromo-3-Chloropropane	ND		400		ug/L			12/08/16 11:56	400
1,2-Dichlorobenzene	ND		400		ug/L			12/08/16 11:56	400
1,2-Dichloroethane	ND		400		ug/L			12/08/16 11:56	400
1,2-Dichloropropane	ND		400		ug/L			12/08/16 11:56	400
1,3-Dichlorobenzene	ND		400		ug/L			12/08/16 11:56	400
1,4-Dichlorobenzene	ND		400		ug/L			12/08/16 11:56	400
2-Butanone (MEK)	ND		4000		ug/L			12/08/16 11:56	400
2-Hexanone	ND		2000		ug/L			12/08/16 11:56	400
4-Methyl-2-pentanone (MIBK)	ND		2000		ug/L			12/08/16 11:56	400
Acetone	ND		4000		ug/L			12/08/16 11:56	400
Benzene	ND		400		ug/L			12/08/16 11:56	400
Bromodichloromethane	ND		400		ug/L			12/08/16 11:56	400
Bromoform	ND		400		ug/L			12/08/16 11:56	400
Bromomethane	ND		400		ug/L			12/08/16 11:56	400
Carbon disulfide	ND		400		ug/L			12/08/16 11:56	400
Carbon tetrachloride	ND		400		ug/L			12/08/16 11:56	400
Chlorobenzene	ND		400		ug/L			12/08/16 11:56	400
Dibromochloromethane	ND		400		ug/L			12/08/16 11:56	400
Chloroethane	ND		400		ug/L			12/08/16 11:56	400
Chloroform	ND		400		ug/L			12/08/16 11:56	400
Chloromethane	ND		400		ug/L			12/08/16 11:56	400
cis-1,2-Dichloroethene	ND		400		ug/L			12/08/16 11:56	400
cis-1,3-Dichloropropene	ND		400		ug/L			12/08/16 11:56	400
Cyclohexane	ND		400		ug/L			12/08/16 11:56	400
Dichlorodifluoromethane	ND		400		ug/L			12/08/16 11:56	400
Ethylbenzene	4300		400		ug/L			12/08/16 11:56	400
1,2-Dibromoethane	ND		400		ug/L			12/08/16 11:56	400
Isopropylbenzene	ND		400		ug/L			12/08/16 11:56	400
Methyl acetate	ND		1000		ug/L			12/08/16 11:56	400
Methyl tert-butyl ether	ND		400		ug/L			12/08/16 11:56	400
Methylcyclohexane	ND		400		ug/L			12/08/16 11:56	400
Methylene Chloride	ND		400		ug/L			12/08/16 11:56	400
Styrene	ND		400		ug/L			12/08/16 11:56	400
Tetrachloroethene	ND		400		ug/L			12/08/16 11:56	400
Toluene	17000		400		ug/L			12/08/16 11:56	400
trans-1,2-Dichloroethene	ND		400		ug/L			12/08/16 11:56	400
trans-1,3-Dichloropropene	ND		400		ug/L			12/08/16 11:56	400
Trichloroethene	ND		400		ug/L			12/08/16 11:56	400
Trichlorofluoromethane	ND		400		ug/L			12/08/16 11:56	400
Vinyl chloride	ND		400		ug/L			12/08/16 11:56	400
Xylenes, Total	16000		800		ug/L			12/08/16 11:56	400

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-002

Lab Sample ID: 480-110656-2

Date Collected: 12/05/16 11:45

Matrix: Water

Date Received: 12/07/16 09:30

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/08/16 11:56	400
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120					12/08/16 11:56	400
1,2-Dichloroethane-d4 (Surr)	104		77 - 120					12/08/16 11:56	400
4-Bromofluorobenzene (Surr)	94		73 - 120					12/08/16 11:56	400
Dibromofluoromethane (Surr)	103		75 - 123					12/08/16 11:56	400

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
2,4,6-Trichlorophenol	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
2,4-Dichlorophenol	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
2,4-Dimethylphenol	6800	E	250		ug/L		12/09/16 06:12	12/14/16 23:12	10
2,4-Dinitrophenol	ND		500		ug/L		12/09/16 06:12	12/14/16 23:12	10
2,4-Dinitrotoluene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
2,6-Dinitrotoluene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
2-Chloronaphthalene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
2-Chlorophenol	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
2-Methylnaphthalene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
2-Methylphenol	3600	E	250		ug/L		12/09/16 06:12	12/14/16 23:12	10
2-Nitroaniline	ND		500		ug/L		12/09/16 06:12	12/14/16 23:12	10
2-Nitrophenol	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
3,3'-Dichlorobenzidine	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
3-Nitroaniline	ND		500		ug/L		12/09/16 06:12	12/14/16 23:12	10
4,6-Dinitro-2-methylphenol	ND		500		ug/L		12/09/16 06:12	12/14/16 23:12	10
4-Bromophenyl phenyl ether	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
4-Chloro-3-methylphenol	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
4-Chloroaniline	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
4-Chlorophenyl phenyl ether	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
4-Methylphenol	17000	E	500		ug/L		12/09/16 06:12	12/14/16 23:12	10
4-Nitroaniline	ND		500		ug/L		12/09/16 06:12	12/14/16 23:12	10
4-Nitrophenol	ND		500		ug/L		12/09/16 06:12	12/14/16 23:12	10
Acenaphthene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Acenaphthylene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Acetophenone	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Anthracene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Atrazine	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Benzaldehyde	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Benzo[a]anthracene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Benzo[a]pyrene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Benzo[b]fluoranthene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Benzo[g,h,i]perylene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Benzo[k]fluoranthene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Biphenyl	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
bis (2-chloroisopropyl) ether	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Bis(2-chloroethoxy)methane	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Bis(2-chloroethyl)ether	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Bis(2-ethylhexyl) phthalate	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Butyl benzyl phthalate	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-002

Lab Sample ID: 480-110656-2

Date Collected: 12/05/16 11:45

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Caprolactam	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Carbazole	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Chrysene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Dibenz(a,h)anthracene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Dibenzofuran	ND		500		ug/L		12/09/16 06:12	12/14/16 23:12	10
Diethyl phthalate	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Dimethyl phthalate	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Di-n-butyl phthalate	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Di-n-octyl phthalate	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Fluoranthene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Fluorene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Hexachlorobenzene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Hexachlorobutadiene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Hexachlorocyclopentadiene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Hexachloroethane	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Indeno[1,2,3-cd]pyrene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Isophorone	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Naphthalene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Nitrobenzene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
N-Nitrosodi-n-propylamine	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
N-Nitrosodiphenylamine	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Pentachlorophenol	ND		500		ug/L		12/09/16 06:12	12/14/16 23:12	10
Phenanthrene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Phenol	18000	E	250		ug/L		12/09/16 06:12	12/14/16 23:12	10
Pyrene	ND		250		ug/L		12/09/16 06:12	12/14/16 23:12	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	116		52 - 132	12/09/16 06:12	12/14/16 23:12	10
2-Fluorobiphenyl	87		48 - 120	12/09/16 06:12	12/14/16 23:12	10
2-Fluorophenol (Surr)	0	X	20 - 120	12/09/16 06:12	12/14/16 23:12	10
Nitrobenzene-d5 (Surr)	73		46 - 120	12/09/16 06:12	12/14/16 23:12	10
Phenol-d5 (Surr)	0	X	16 - 120	12/09/16 06:12	12/14/16 23:12	10
p-Terphenyl-d14 (Surr)	96		67 - 150	12/09/16 06:12	12/14/16 23:12	10

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
2,4,6-Trichlorophenol	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
2,4-Dichlorophenol	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
2,4-Dimethylphenol	7000		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
2,4-Dinitrophenol	ND		10000		ug/L		12/09/16 06:12	12/15/16 18:20	200
2,4-Dinitrotoluene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
2,6-Dinitrotoluene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
2-Chloronaphthalene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
2-Chlorophenol	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
2-Methylnaphthalene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
2-Methylphenol	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
2-Nitroaniline	ND		10000		ug/L		12/09/16 06:12	12/15/16 18:20	200
2-Nitrophenol	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
3,3'-Dichlorobenzidine	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-002

Lab Sample ID: 480-110656-2

Date Collected: 12/05/16 11:45

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitroaniline	ND		10000		ug/L		12/09/16 06:12	12/15/16 18:20	200
4,6-Dinitro-2-methylphenol	ND		10000		ug/L		12/09/16 06:12	12/15/16 18:20	200
4-Bromophenyl phenyl ether	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
4-Chloro-3-methylphenol	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
4-Chloroaniline	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
4-Chlorophenyl phenyl ether	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
4-Methylphenol	17000		10000		ug/L		12/09/16 06:12	12/15/16 18:20	200
4-Nitroaniline	ND		10000		ug/L		12/09/16 06:12	12/15/16 18:20	200
4-Nitrophenol	ND		10000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Acenaphthene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Acenaphthylene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Acetophenone	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Anthracene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Atrazine	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Benzaldehyde	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Benzo[a]anthracene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Benzo[a]pyrene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Benzo[b]fluoranthene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Benzo[g,h,i]perylene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Benzo[k]fluoranthene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Biphenyl	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
bis (2-chloroisopropyl) ether	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Bis(2-chloroethoxy)methane	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Bis(2-chloroethyl)ether	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Bis(2-ethylhexyl) phthalate	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Butyl benzyl phthalate	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Caprolactam	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Carbazole	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Chrysene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Dibenz(a,h)anthracene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Dibenzofuran	ND		10000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Diethyl phthalate	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Dimethyl phthalate	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Di-n-butyl phthalate	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Di-n-octyl phthalate	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Fluoranthene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Fluorene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Hexachlorobenzene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Hexachlorobutadiene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Hexachlorocyclopentadiene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Hexachloroethane	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Indeno[1,2,3-cd]pyrene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Isophorone	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Naphthalene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Nitrobenzene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
N-Nitrosodi-n-propylamine	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
N-Nitrosodiphenylamine	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Pentachlorophenol	ND		10000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Phenanthrene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-002

Lab Sample ID: 480-110656-2

Date Collected: 12/05/16 11:45

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	22000		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200
Pyrene	ND		5000		ug/L		12/09/16 06:12	12/15/16 18:20	200

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Toluene	8300	T J N	ug/L		3.42	108-88-3	12/09/16 06:12	12/15/16 18:20	200
Ethylbenzene	3100	T J N	ug/L		4.54	100-41-4	12/09/16 06:12	12/15/16 18:20	200
Benzene, 1,3-dimethyl-	8200	T J N	ug/L		4.63	108-38-3	12/09/16 06:12	12/15/16 18:20	200
Benzene, 1,2-dimethyl-	2800	T J N	ug/L		4.86	95-47-6	12/09/16 06:12	12/15/16 18:20	200
Unknown	1900	T J	ug/L		5.94		12/09/16 06:12	12/15/16 18:20	200
2-Pyrrolidinone, 1-methyl-	5700	T J N	ug/L		6.00	872-50-4	12/09/16 06:12	12/15/16 18:20	200
Unknown	1900	T J	ug/L		6.47		12/09/16 06:12	12/15/16 18:20	200
Phenol, 3-ethyl-	9000	T J N	ug/L		6.79	620-17-7	12/09/16 06:12	12/15/16 18:20	200
Phenol, 3,4-dimethyl-	2200	T J N	ug/L		6.94	95-65-8	12/09/16 06:12	12/15/16 18:20	200
Unknown	2000	T J	ug/L		7.27		12/09/16 06:12	12/15/16 18:20	200
Phenol, m-tert-butyl-	2100	T J N	ug/L		7.45	585-34-2	12/09/16 06:12	12/15/16 18:20	200
Phenol, 4-(1-methylpropyl)-	1700	T J N	ug/L		7.55	99-71-8	12/09/16 06:12	12/15/16 18:20	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	0	X	52 - 132	12/09/16 06:12	12/15/16 18:20	200
2-Fluorobiphenyl	83		48 - 120	12/09/16 06:12	12/15/16 18:20	200
2-Fluorophenol (Surr)	0	X	20 - 120	12/09/16 06:12	12/15/16 18:20	200
Nitrobenzene-d5 (Surr)	70		46 - 120	12/09/16 06:12	12/15/16 18:20	200
Phenol-d5 (Surr)	0	X	16 - 120	12/09/16 06:12	12/15/16 18:20	200
p-Terphenyl-d14 (Surr)	85		67 - 150	12/09/16 06:12	12/15/16 18:20	200

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		13		ug/L		12/08/16 06:26	12/09/16 06:21	5
PCB-1221	ND		13		ug/L		12/08/16 06:26	12/09/16 06:21	5
PCB-1232	ND		13		ug/L		12/08/16 06:26	12/09/16 06:21	5
PCB-1242	130		13		ug/L		12/08/16 06:26	12/09/16 06:21	5
PCB-1248	ND		13		ug/L		12/08/16 06:26	12/09/16 06:21	5
PCB-1254	ND		13		ug/L		12/08/16 06:26	12/09/16 06:21	5
PCB-1260	ND		13		ug/L		12/08/16 06:26	12/09/16 06:21	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	0	X	19 - 120	12/08/16 06:26	12/09/16 06:21	5
DCB Decachlorobiphenyl	0	X	19 - 120	12/08/16 06:26	12/09/16 06:21	5
Tetrachloro-m-xylene	127	X	39 - 121	12/08/16 06:26	12/09/16 06:21	5
Tetrachloro-m-xylene	11	X	39 - 121	12/08/16 06:26	12/09/16 06:21	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	3.9		0.20		mg/L		12/08/16 11:30	12/09/16 16:30	1
Antimony	ND		0.020		mg/L		12/08/16 11:30	12/09/16 16:30	1
Arsenic	0.084		0.015		mg/L		12/08/16 11:30	12/09/16 16:30	1
Barium	0.28		0.0020		mg/L		12/08/16 11:30	12/09/16 16:30	1
Beryllium	0.0026		0.0020		mg/L		12/08/16 11:30	12/09/16 16:30	1
Cadmium	0.0038		0.0020		mg/L		12/08/16 11:30	12/09/16 16:30	1
Calcium	9.3		0.50		mg/L		12/08/16 11:30	12/09/16 16:30	1
Chromium	0.073		0.0040		mg/L		12/08/16 11:30	12/09/16 16:30	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-002

Lab Sample ID: 480-110656-2

Date Collected: 12/05/16 11:45

Matrix: Water

Date Received: 12/07/16 09:30

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.015		0.0040		mg/L		12/08/16 11:30	12/09/16 16:30	1
Copper	0.33		0.010		mg/L		12/08/16 11:30	12/09/16 16:30	1
Iron	12.7		0.050		mg/L		12/08/16 11:30	12/09/16 16:30	1
Lead	0.23		0.010		mg/L		12/08/16 11:30	12/09/16 16:30	1
Magnesium	0.59		0.20		mg/L		12/08/16 11:30	12/09/16 16:30	1
Manganese	0.67		0.0030		mg/L		12/08/16 11:30	12/09/16 16:30	1
Nickel	0.15		0.010		mg/L		12/08/16 11:30	12/09/16 16:30	1
Potassium	10.2		0.50		mg/L		12/08/16 11:30	12/09/16 16:30	1
Selenium	ND		0.025		mg/L		12/08/16 11:30	12/09/16 16:30	1
Silver	ND		0.0060		mg/L		12/08/16 11:30	12/09/16 16:30	1
Sodium	1200		1.0		mg/L		12/08/16 11:30	12/09/16 16:30	1
Thallium	ND		0.020		mg/L		12/08/16 11:30	12/09/16 16:30	1
Vanadium	0.30		0.0050		mg/L		12/08/16 11:30	12/09/16 16:30	1
Zinc	0.061		0.010		mg/L		12/08/16 11:30	12/09/16 16:30	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00078		0.00020		mg/L		12/09/16 08:25	12/09/16 13:43	1

Client Sample ID: WG-080987-120516-BP-003

Lab Sample ID: 480-110656-3

Date Collected: 12/05/16 14:30

Matrix: Water

Date Received: 12/07/16 09:30

MW-6

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
1,1,2-Trichloroethane	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
1,1-Dichloroethane	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
1,1-Dichloroethene	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
1,2-Dichlorobenzene	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
1,2-Dichloroethane	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
1,2-Dichloropropane	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
1,3-Dichlorobenzene	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
1,4-Dichlorobenzene	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
2-Butanone (MEK)	ND		10		ug/L		12/08/16 12:19	12/08/16 12:19	1
2-Hexanone	ND		5.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
Acetone	11		10		ug/L		12/08/16 12:19	12/08/16 12:19	1
Benzene	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
Bromodichloromethane	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
Bromoform	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
Bromomethane	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
Carbon disulfide	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
Carbon tetrachloride	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
Chlorobenzene	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1
Dibromochloromethane	ND		1.0		ug/L		12/08/16 12:19	12/08/16 12:19	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-003

Lab Sample ID: 480-110656-3

Date Collected: 12/05/16 14:30

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		1.0		ug/L			12/08/16 12:19	1
Chloroform	ND		1.0		ug/L			12/08/16 12:19	1
Chloromethane	ND		1.0		ug/L			12/08/16 12:19	1
cis-1,2-Dichloroethene	2.2		1.0		ug/L			12/08/16 12:19	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 12:19	1
Cyclohexane	ND		1.0		ug/L			12/08/16 12:19	1
Dichlorodifluoromethane	ND		1.0		ug/L			12/08/16 12:19	1
Ethylbenzene	4.7		1.0		ug/L			12/08/16 12:19	1
1,2-Dibromoethane	ND		1.0		ug/L			12/08/16 12:19	1
Isopropylbenzene	ND		1.0		ug/L			12/08/16 12:19	1
Methyl acetate	ND		2.5		ug/L			12/08/16 12:19	1
Methyl tert-butyl ether	ND		1.0		ug/L			12/08/16 12:19	1
Methylcyclohexane	ND		1.0		ug/L			12/08/16 12:19	1
Methylene Chloride	ND		1.0		ug/L			12/08/16 12:19	1
Styrene	ND		1.0		ug/L			12/08/16 12:19	1
Tetrachloroethene	ND		1.0		ug/L			12/08/16 12:19	1
Toluene	15		1.0		ug/L			12/08/16 12:19	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			12/08/16 12:19	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 12:19	1
Trichloroethene	ND		1.0		ug/L			12/08/16 12:19	1
Trichlorofluoromethane	ND		1.0		ug/L			12/08/16 12:19	1
Vinyl chloride	ND		1.0		ug/L			12/08/16 12:19	1
Xylenes, Total	17		2.0		ug/L			12/08/16 12:19	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/08/16 12:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120		12/08/16 12:19	1
1,2-Dichloroethane-d4 (Surr)	102		77 - 120		12/08/16 12:19	1
4-Bromofluorobenzene (Surr)	94		73 - 120		12/08/16 12:19	1
Dibromofluoromethane (Surr)	100		75 - 123		12/08/16 12:19	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
2,4,6-Trichlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
2,4-Dichlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
2,4-Dimethylphenol	4.9		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
2,4-Dinitrophenol	ND		9.4		ug/L		12/09/16 06:12	12/14/16 23:40	1
2,4-Dinitrotoluene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
2,6-Dinitrotoluene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
2-Chloronaphthalene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
2-Chlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
2-Methylnaphthalene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
2-Methylphenol	5.6		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
2-Nitroaniline	ND		9.4		ug/L		12/09/16 06:12	12/14/16 23:40	1
2-Nitrophenol	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
3,3'-Dichlorobenzidine	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
3-Nitroaniline	ND		9.4		ug/L		12/09/16 06:12	12/14/16 23:40	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-003

Lab Sample ID: 480-110656-3

Date Collected: 12/05/16 14:30

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND		9.4		ug/L		12/09/16 06:12	12/14/16 23:40	1
4-Bromophenyl phenyl ether	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
4-Chloro-3-methylphenol	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
4-Chloroaniline	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
4-Chlorophenyl phenyl ether	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
4-Methylphenol	ND		9.4		ug/L		12/09/16 06:12	12/14/16 23:40	1
4-Nitroaniline	ND		9.4		ug/L		12/09/16 06:12	12/14/16 23:40	1
4-Nitrophenol	ND		9.4		ug/L		12/09/16 06:12	12/14/16 23:40	1
Acenaphthene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Acenaphthylene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Acetophenone	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Anthracene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Atrazine	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Benzaldehyde	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Benzo[a]anthracene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Benzo[a]pyrene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Benzo[b]fluoranthene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Benzo[g,h,i]perylene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Benzo[k]fluoranthene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Biphenyl	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
bis (2-chloroisopropyl) ether	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Bis(2-chloroethoxy)methane	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Bis(2-chloroethyl)ether	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Bis(2-ethylhexyl) phthalate	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Butyl benzyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Caprolactam	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Carbazole	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Chrysene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Dibenz(a,h)anthracene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Dibenzofuran	ND		9.4		ug/L		12/09/16 06:12	12/14/16 23:40	1
Diethyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Dimethyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Di-n-butyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Di-n-octyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Fluoranthene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Fluorene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Hexachlorobenzene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Hexachlorobutadiene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Hexachlorocyclopentadiene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Hexachloroethane	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Indeno[1,2,3-cd]pyrene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Isophorone	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Naphthalene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Nitrobenzene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
N-Nitrosodi-n-propylamine	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
N-Nitrosodiphenylamine	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Pentachlorophenol	ND		9.4		ug/L		12/09/16 06:12	12/14/16 23:40	1
Phenanthrene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1
Phenol	11		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-003

Lab Sample ID: 480-110656-3

Date Collected: 12/05/16 14:30

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyrene	ND		4.7		ug/L		12/09/16 06:12	12/14/16 23:40	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	58	T J	ug/L		2.51		12/09/16 06:12	12/14/16 23:40	1
Toluene	9.3	T J N	ug/L		3.51	108-88-3	12/09/16 06:12	12/14/16 23:40	1
Unknown	49	T J	ug/L		4.35		12/09/16 06:12	12/14/16 23:40	1
Ethylbenzene	3.9	T J N	ug/L		4.58	100-41-4	12/09/16 06:12	12/14/16 23:40	1
Benzene, 1,3-dimethyl-	12	T J N	ug/L		4.67	108-38-3	12/09/16 06:12	12/14/16 23:40	1
Benzene, 1,2-dimethyl-	3.1	T J N	ug/L		4.89	95-47-6	12/09/16 06:12	12/14/16 23:40	1
Unknown	2.1	T J	ug/L		5.22		12/09/16 06:12	12/14/16 23:40	1
Unknown	4.1	T J	ug/L		5.61		12/09/16 06:12	12/14/16 23:40	1
Unknown	1.8	T J	ug/L		5.72		12/09/16 06:12	12/14/16 23:40	1
Unknown	2.5	T J	ug/L		6.01		12/09/16 06:12	12/14/16 23:40	1
Cyclopentasiloxane, decamethyl-	3.0	T J N	ug/L		6.59	541-02-6	12/09/16 06:12	12/14/16 23:40	1
Phenol, 3,5-dimethyl-	3.7	T J N	ug/L		6.80	108-68-9	12/09/16 06:12	12/14/16 23:40	1
Unknown	3.2	T J	ug/L		7.28		12/09/16 06:12	12/14/16 23:40	1
Phenol, m-tert-butyl-	7.5	T J N	ug/L		7.45	585-34-2	12/09/16 06:12	12/14/16 23:40	1
4-Hydroxy-3-methylacetophenone	2.8	T J N	ug/L		8.44	876-02-8	12/09/16 06:12	12/14/16 23:40	1
Benzenesulfonamide, 2-methyl-	1.9	T J N	ug/L		8.95	88-19-7	12/09/16 06:12	12/14/16 23:40	1
Benzenesulfonamide, 4-methyl-	3.5	T J N	ug/L		9.11	70-55-3	12/09/16 06:12	12/14/16 23:40	1
n-Hexadecanoic acid	6.6	T J N	ug/L		10.10	57-10-3	12/09/16 06:12	12/14/16 23:40	1
Octadecanoic acid	1.9	T J N	ug/L		10.74	57-11-4	12/09/16 06:12	12/14/16 23:40	1
Phenol, 4,4'-(1-methylethylidene)bis-	4.2	T J N	ug/L		10.86	80-05-7	12/09/16 06:12	12/14/16 23:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	87		52 - 132	12/09/16 06:12	12/14/16 23:40	1
2-Fluorobiphenyl	67		48 - 120	12/09/16 06:12	12/14/16 23:40	1
2-Fluorophenol (Surr)	52		20 - 120	12/09/16 06:12	12/14/16 23:40	1
Nitrobenzene-d5 (Surr)	66		46 - 120	12/09/16 06:12	12/14/16 23:40	1
Phenol-d5 (Surr)	40		16 - 120	12/09/16 06:12	12/14/16 23:40	1
p-Terphenyl-d14 (Surr)	77		67 - 150	12/09/16 06:12	12/14/16 23:40	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.46		ug/L		12/08/16 06:26	12/09/16 06:36	1
PCB-1221	ND		0.46		ug/L		12/08/16 06:26	12/09/16 06:36	1
PCB-1232	ND		0.46		ug/L		12/08/16 06:26	12/09/16 06:36	1
PCB-1242	ND		0.46		ug/L		12/08/16 06:26	12/09/16 06:36	1
PCB-1248	ND		0.46		ug/L		12/08/16 06:26	12/09/16 06:36	1
PCB-1254	ND		0.46		ug/L		12/08/16 06:26	12/09/16 06:36	1
PCB-1260	ND		0.46		ug/L		12/08/16 06:26	12/09/16 06:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	58		19 - 120	12/08/16 06:26	12/09/16 06:36	1
DCB Decachlorobiphenyl	65		19 - 120	12/08/16 06:26	12/09/16 06:36	1
Tetrachloro-m-xylene	75		39 - 121	12/08/16 06:26	12/09/16 06:36	1
Tetrachloro-m-xylene	75		39 - 121	12/08/16 06:26	12/09/16 06:36	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20		mg/L		12/08/16 11:30	12/09/16 16:33	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-003

Lab Sample ID: 480-110656-3

Date Collected: 12/05/16 14:30

Matrix: Water

Date Received: 12/07/16 09:30

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.020		mg/L		12/08/16 11:30	12/09/16 16:33	1
Arsenic	ND		0.015		mg/L		12/08/16 11:30	12/09/16 16:33	1
Barium	0.46		0.0020		mg/L		12/08/16 11:30	12/09/16 16:33	1
Beryllium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 16:33	1
Cadmium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 16:33	1
Calcium	7.6		0.50		mg/L		12/08/16 11:30	12/09/16 16:33	1
Chromium	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 16:33	1
Cobalt	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 16:33	1
Copper	ND		0.010		mg/L		12/08/16 11:30	12/09/16 16:33	1
Iron	0.26		0.050		mg/L		12/08/16 11:30	12/09/16 16:33	1
Lead	ND		0.010		mg/L		12/08/16 11:30	12/09/16 16:33	1
Magnesium	0.31		0.20		mg/L		12/08/16 11:30	12/09/16 16:33	1
Manganese	0.0030		0.0030		mg/L		12/08/16 11:30	12/09/16 16:33	1
Nickel	ND		0.010		mg/L		12/08/16 11:30	12/09/16 16:33	1
Potassium	6.4		0.50		mg/L		12/08/16 11:30	12/09/16 16:33	1
Selenium	ND		0.025		mg/L		12/08/16 11:30	12/09/16 16:33	1
Silver	ND		0.0060		mg/L		12/08/16 11:30	12/09/16 16:33	1
Sodium	110		1.0		mg/L		12/08/16 11:30	12/09/16 16:33	1
Thallium	ND		0.020		mg/L		12/08/16 11:30	12/09/16 16:33	1
Vanadium	ND		0.0050		mg/L		12/08/16 11:30	12/09/16 16:33	1
Zinc	0.025		0.010		mg/L		12/08/16 11:30	12/09/16 16:33	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		12/09/16 08:25	12/09/16 13:45	1

Client Sample ID: WG-080987-120516-BP-004

Lab Sample ID: 480-110656-4

Date Collected: 12/05/16 13:30

Matrix: Water

Date Received: 12/07/16 09:30

MW-6 S

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		25		ug/L			12/08/16 12:42	25
1,1,2,2-Tetrachloroethane	ND		25		ug/L			12/08/16 12:42	25
1,1,2-Trichloroethane	ND		25		ug/L			12/08/16 12:42	25
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25		ug/L			12/08/16 12:42	25
1,1-Dichloroethane	ND		25		ug/L			12/08/16 12:42	25
1,1-Dichloroethene	ND		25		ug/L			12/08/16 12:42	25
1,2,4-Trichlorobenzene	ND		25		ug/L			12/08/16 12:42	25
1,2-Dibromo-3-Chloropropane	ND		25		ug/L			12/08/16 12:42	25
1,2-Dichlorobenzene	ND		25		ug/L			12/08/16 12:42	25
1,2-Dichloroethane	ND		25		ug/L			12/08/16 12:42	25
1,2-Dichloropropane	ND		25		ug/L			12/08/16 12:42	25
1,3-Dichlorobenzene	ND		25		ug/L			12/08/16 12:42	25
1,4-Dichlorobenzene	ND		25		ug/L			12/08/16 12:42	25
2-Butanone (MEK)	ND		250		ug/L			12/08/16 12:42	25
2-Hexanone	ND		130		ug/L			12/08/16 12:42	25
4-Methyl-2-pentanone (MIBK)	ND		130		ug/L			12/08/16 12:42	25
Acetone	610		250		ug/L			12/08/16 12:42	25
Benzene	48		25		ug/L			12/08/16 12:42	25

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-004

Lab Sample ID: 480-110656-4

Date Collected: 12/05/16 13:30

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		25		ug/L			12/08/16 12:42	25
Bromoform	ND		25		ug/L			12/08/16 12:42	25
Bromomethane	ND		25		ug/L			12/08/16 12:42	25
Carbon disulfide	ND		25		ug/L			12/08/16 12:42	25
Carbon tetrachloride	ND		25		ug/L			12/08/16 12:42	25
Chlorobenzene	ND		25		ug/L			12/08/16 12:42	25
Dibromochloromethane	ND		25		ug/L			12/08/16 12:42	25
Chloroethane	ND		25		ug/L			12/08/16 12:42	25
Chloroform	ND		25		ug/L			12/08/16 12:42	25
Chloromethane	ND		25		ug/L			12/08/16 12:42	25
cis-1,2-Dichloroethene	620		25		ug/L			12/08/16 12:42	25
cis-1,3-Dichloropropene	ND		25		ug/L			12/08/16 12:42	25
Cyclohexane	ND		25		ug/L			12/08/16 12:42	25
Dichlorodifluoromethane	ND		25		ug/L			12/08/16 12:42	25
Ethylbenzene	270		25		ug/L			12/08/16 12:42	25
1,2-Dibromoethane	ND		25		ug/L			12/08/16 12:42	25
Isopropylbenzene	ND		25		ug/L			12/08/16 12:42	25
Methyl acetate	ND		63		ug/L			12/08/16 12:42	25
Methyl tert-butyl ether	ND		25		ug/L			12/08/16 12:42	25
Methylcyclohexane	ND		25		ug/L			12/08/16 12:42	25
Methylene Chloride	ND		25		ug/L			12/08/16 12:42	25
Styrene	ND		25		ug/L			12/08/16 12:42	25
Tetrachloroethene	ND		25		ug/L			12/08/16 12:42	25
Toluene	1300		25		ug/L			12/08/16 12:42	25
trans-1,2-Dichloroethene	ND		25		ug/L			12/08/16 12:42	25
trans-1,3-Dichloropropene	ND		25		ug/L			12/08/16 12:42	25
Trichloroethene	ND		25		ug/L			12/08/16 12:42	25
Trichlorofluoromethane	ND		25		ug/L			12/08/16 12:42	25
Vinyl chloride	81		25		ug/L			12/08/16 12:42	25
Xylenes, Total	1000		50		ug/L			12/08/16 12:42	25

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/08/16 12:42	25

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		12/08/16 12:42	25
1,2-Dichloroethane-d4 (Surr)	103		77 - 120		12/08/16 12:42	25
4-Bromofluorobenzene (Surr)	95		73 - 120		12/08/16 12:42	25
Dibromofluoromethane (Surr)	104		75 - 123		12/08/16 12:42	25

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
2,4,6-Trichlorophenol	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
2,4-Dichlorophenol	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
2,4-Dimethylphenol	1300	E	47		ug/L		12/09/16 06:12	12/15/16 00:08	10
2,4-Dinitrophenol	ND	F1	93		ug/L		12/09/16 06:12	12/15/16 00:08	10
2,4-Dinitrotoluene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
2,6-Dinitrotoluene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
2-Chloronaphthalene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-004

Lab Sample ID: 480-110656-4

Date Collected: 12/05/16 13:30

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
2-Methylnaphthalene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
2-Methylphenol	1200	E	47		ug/L		12/09/16 06:12	12/15/16 00:08	10
2-Nitroaniline	ND		93		ug/L		12/09/16 06:12	12/15/16 00:08	10
2-Nitrophenol	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
3,3'-Dichlorobenzidine	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
3-Nitroaniline	ND	F1	93		ug/L		12/09/16 06:12	12/15/16 00:08	10
4,6-Dinitro-2-methylphenol	ND		93		ug/L		12/09/16 06:12	12/15/16 00:08	10
4-Bromophenyl phenyl ether	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
4-Chloro-3-methylphenol	ND	F1	47		ug/L		12/09/16 06:12	12/15/16 00:08	10
4-Chloroaniline	ND	F1	47		ug/L		12/09/16 06:12	12/15/16 00:08	10
4-Chlorophenyl phenyl ether	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
4-Methylphenol	3600	E	93		ug/L		12/09/16 06:12	12/15/16 00:08	10
4-Nitroaniline	ND		93		ug/L		12/09/16 06:12	12/15/16 00:08	10
4-Nitrophenol	ND		93		ug/L		12/09/16 06:12	12/15/16 00:08	10
Acenaphthene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Acenaphthylene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Acetophenone	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Anthracene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Atrazine	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Benzaldehyde	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Benzo[a]anthracene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Benzo[a]pyrene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Benzo[b]fluoranthene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Benzo[g,h,i]perylene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Benzo[k]fluoranthene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Biphenyl	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
bis (2-chloroisopropyl) ether	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Bis(2-chloroethoxy)methane	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Bis(2-chloroethyl)ether	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Bis(2-ethylhexyl) phthalate	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Butyl benzyl phthalate	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Caprolactam	ND	F1	47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Carbazole	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Chrysene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Dibenz(a,h)anthracene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Dibenzofuran	ND		93		ug/L		12/09/16 06:12	12/15/16 00:08	10
Diethyl phthalate	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Dimethyl phthalate	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Di-n-butyl phthalate	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Di-n-octyl phthalate	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Fluoranthene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Fluorene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Hexachlorobenzene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Hexachlorobutadiene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Hexachlorocyclopentadiene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Hexachloroethane	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Indeno[1,2,3-cd]pyrene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Isophorone	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-004

Lab Sample ID: 480-110656-4

Date Collected: 12/05/16 13:30

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND	F1	47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Nitrobenzene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
N-Nitrosodi-n-propylamine	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
N-Nitrosodiphenylamine	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Pentachlorophenol	ND		93		ug/L		12/09/16 06:12	12/15/16 00:08	10
Phenanthrene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Phenol	2000	E	47		ug/L		12/09/16 06:12	12/15/16 00:08	10
Pyrene	ND		47		ug/L		12/09/16 06:12	12/15/16 00:08	10

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Toluene	670	T J N	ug/L		3.43	108-88-3	12/09/16 06:12	12/15/16 00:08	10
Ethylbenzene	250	T J N	ug/L		4.55	100-41-4	12/09/16 06:12	12/15/16 00:08	10
Benzene, 1,3-dimethyl-	220	T J N	ug/L		4.86	108-38-3	12/09/16 06:12	12/15/16 00:08	10
2-Pyrrolidinone, 1-methyl-	380	T J N	ug/L		6.16	872-50-4	12/09/16 06:12	12/15/16 00:08	10
Phenol, 2,6-dimethyl-	180	T J N	ug/L		6.48	576-26-1	12/09/16 06:12	12/15/16 00:08	10
Hexanoic acid, 2-ethyl-	520	T J N	ug/L		6.60	149-57-5	12/09/16 06:12	12/15/16 00:08	10
Phenol, 2-ethyl-	520	T J N	ug/L		6.63	90-00-6	12/09/16 06:12	12/15/16 00:08	10
Phenol, 3-ethyl-	2800	T J N	ug/L		6.82	620-17-7	12/09/16 06:12	12/15/16 00:08	10
Phenol, 4-(1-methylethyl)-	260	T J N	ug/L		7.12	99-89-8	12/09/16 06:12	12/15/16 00:08	10
Phenol, 2-(1-methylethyl)-	140	T J N	ug/L		7.18	88-69-7	12/09/16 06:12	12/15/16 00:08	10
Phenol, 3-ethyl-5-methyl-	110	T J N	ug/L		7.21	698-71-5	12/09/16 06:12	12/15/16 00:08	10
Unknown	400	T J	ug/L		7.29		12/09/16 06:12	12/15/16 00:08	10
Benzoic acid, 4-methyl-	150	T J N	ug/L		7.35	99-94-5	12/09/16 06:12	12/15/16 00:08	10
Phenol, 2-ethyl-6-methyl-	170	T J N	ug/L		7.38	1687-64-5	12/09/16 06:12	12/15/16 00:08	10
Phenol, m-tert-butyl-	400	T J N	ug/L		7.46	585-34-2	12/09/16 06:12	12/15/16 00:08	10
Phenol, 4-(1-methylpropyl)-	200	T J N	ug/L		7.56	99-71-8	12/09/16 06:12	12/15/16 00:08	10
Benzoic acid, 4-chloro-	120	T J N	ug/L		7.68	74-11-3	12/09/16 06:12	12/15/16 00:08	10
Unknown	240	T J	ug/L		8.16		12/09/16 06:12	12/15/16 00:08	10
Phenol, (1,1,3,3-tetramethylbutyl)-	280	T J N	ug/L		8.86	27193-28-8	12/09/16 06:12	12/15/16 00:08	10
1-Phenanthrenecarboxylic acid, 1,2,3,4,4	310	T J N	ug/L		11.77	1740-19-8	12/09/16 06:12	12/15/16 00:08	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	113		52 - 132	12/09/16 06:12	12/15/16 00:08	10
2-Fluorobiphenyl	84		48 - 120	12/09/16 06:12	12/15/16 00:08	10
2-Fluorophenol (Surr)	60		20 - 120	12/09/16 06:12	12/15/16 00:08	10
Nitrobenzene-d5 (Surr)	69		46 - 120	12/09/16 06:12	12/15/16 00:08	10
Phenol-d5 (Surr)	0	X	16 - 120	12/09/16 06:12	12/15/16 00:08	10
p-Terphenyl-d14 (Surr)	88		67 - 150	12/09/16 06:12	12/15/16 00:08	10

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
2,4,6-Trichlorophenol	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
2,4-Dichlorophenol	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
2,4-Dimethylphenol	1500		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
2,4-Dinitrophenol	ND		1900		ug/L		12/09/16 06:12	12/15/16 18:49	200
2,4-Dinitrotoluene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
2,6-Dinitrotoluene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
2-Chloronaphthalene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-004

Lab Sample ID: 480-110656-4

Date Collected: 12/05/16 13:30

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
2-Methylnaphthalene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
2-Methylphenol	1200		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
2-Nitroaniline	ND		1900		ug/L		12/09/16 06:12	12/15/16 18:49	200
2-Nitrophenol	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
3,3'-Dichlorobenzidine	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
3-Nitroaniline	ND		1900		ug/L		12/09/16 06:12	12/15/16 18:49	200
4,6-Dinitro-2-methylphenol	ND		1900		ug/L		12/09/16 06:12	12/15/16 18:49	200
4-Bromophenyl phenyl ether	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
4-Chloro-3-methylphenol	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
4-Chloroaniline	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
4-Chlorophenyl phenyl ether	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
4-Methylphenol	3800		1900		ug/L		12/09/16 06:12	12/15/16 18:49	200
4-Nitroaniline	ND		1900		ug/L		12/09/16 06:12	12/15/16 18:49	200
4-Nitrophenol	ND		1900		ug/L		12/09/16 06:12	12/15/16 18:49	200
Acenaphthene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Acenaphthylene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Acetophenone	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Anthracene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Atrazine	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Benzaldehyde	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Benzo[a]anthracene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Benzo[a]pyrene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Benzo[b]fluoranthene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Benzo[g,h,i]perylene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Benzo[k]fluoranthene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Biphenyl	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
bis (2-chloroisopropyl) ether	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Bis(2-chloroethoxy)methane	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Bis(2-chloroethyl)ether	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Bis(2-ethylhexyl) phthalate	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Butyl benzyl phthalate	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Caprolactam	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Carbazole	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Chrysene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Dibenz(a,h)anthracene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Dibenzofuran	ND		1900		ug/L		12/09/16 06:12	12/15/16 18:49	200
Diethyl phthalate	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Dimethyl phthalate	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Di-n-butyl phthalate	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Di-n-octyl phthalate	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Fluoranthene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Fluorene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Hexachlorobenzene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Hexachlorobutadiene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Hexachlorocyclopentadiene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Hexachloroethane	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Indeno[1,2,3-cd]pyrene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Isophorone	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-004

Lab Sample ID: 480-110656-4

Date Collected: 12/05/16 13:30

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Nitrobenzene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
N-Nitrosodi-n-propylamine	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
N-Nitrosodiphenylamine	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Pentachlorophenol	ND		1900		ug/L		12/09/16 06:12	12/15/16 18:49	200
Phenanthrene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Phenol	2300		930		ug/L		12/09/16 06:12	12/15/16 18:49	200
Pyrene	ND		930		ug/L		12/09/16 06:12	12/15/16 18:49	200

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Toluene	720	T J N	ug/L		3.42	108-88-3	12/09/16 06:12	12/15/16 18:49	200
Benzene, 1,3-dimethyl-	590	T J N	ug/L		4.63	108-38-3	12/09/16 06:12	12/15/16 18:49	200
2-Pyrrolidinone, 1-methyl-	1000	T J N	ug/L		6.00	872-50-4	12/09/16 06:12	12/15/16 18:49	200
Unknown	430	T J	ug/L		6.47		12/09/16 06:12	12/15/16 18:49	200
Phenol, 2-ethyl-	320	T J N	ug/L		6.62	90-00-6	12/09/16 06:12	12/15/16 18:49	200
Phenol, 3-ethyl-	1800	T J N	ug/L		6.79	620-17-7	12/09/16 06:12	12/15/16 18:49	200
Phenol, 3,4-dimethyl-	540	T J N	ug/L		6.94	95-65-8	12/09/16 06:12	12/15/16 18:49	200
Unknown	490	T J	ug/L		7.27		12/09/16 06:12	12/15/16 18:49	200
Phenol, p-tert-butyl-	450	T J N	ug/L		7.45	98-54-4	12/09/16 06:12	12/15/16 18:49	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	362	X	52 - 132	12/09/16 06:12	12/15/16 18:49	200
2-Fluorobiphenyl	86		48 - 120	12/09/16 06:12	12/15/16 18:49	200
2-Fluorophenol (Surr)	0	X	20 - 120	12/09/16 06:12	12/15/16 18:49	200
Nitrobenzene-d5 (Surr)	88		46 - 120	12/09/16 06:12	12/15/16 18:49	200
Phenol-d5 (Surr)	46		16 - 120	12/09/16 06:12	12/15/16 18:49	200
p-Terphenyl-d14 (Surr)	0	X	67 - 150	12/09/16 06:12	12/15/16 18:49	200

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	F1	0.93		ug/L		12/08/16 06:26	12/09/16 06:51	2
PCB-1221	ND		0.93		ug/L		12/08/16 06:26	12/09/16 06:51	2
PCB-1232	ND		0.93		ug/L		12/08/16 06:26	12/09/16 06:51	2
PCB-1242	ND		0.93		ug/L		12/08/16 06:26	12/09/16 06:51	2
PCB-1248	8.3		0.93		ug/L		12/08/16 06:26	12/09/16 06:51	2
PCB-1254	ND		0.93		ug/L		12/08/16 06:26	12/09/16 06:51	2
PCB-1260	ND	F1	0.93		ug/L		12/08/16 06:26	12/09/16 06:51	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	14	X	19 - 120	12/08/16 06:26	12/09/16 06:51	2
DCB Decachlorobiphenyl	20		19 - 120	12/08/16 06:26	12/09/16 06:51	2
Tetrachloro-m-xylene	260	X	39 - 121	12/08/16 06:26	12/09/16 06:51	2
Tetrachloro-m-xylene	69		39 - 121	12/08/16 06:26	12/09/16 06:51	2

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.35		0.20		mg/L		12/08/16 11:30	12/09/16 16:37	1
Antimony	ND		0.020		mg/L		12/08/16 11:30	12/09/16 16:37	1
Arsenic	ND		0.015		mg/L		12/08/16 11:30	12/09/16 16:37	1
Barium	0.047		0.0020		mg/L		12/08/16 11:30	12/09/16 16:37	1
Beryllium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 16:37	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-004

Lab Sample ID: 480-110656-4

Date Collected: 12/05/16 13:30

Matrix: Water

Date Received: 12/07/16 09:30

Method: 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 16:37	1
Calcium	5.3		0.50		mg/L		12/08/16 11:30	12/09/16 16:37	1
Chromium	0.0080		0.0040		mg/L		12/08/16 11:30	12/09/16 16:37	1
Cobalt	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 16:37	1
Copper	0.081		0.010		mg/L		12/08/16 11:30	12/09/16 16:37	1
Iron	1.5		0.050		mg/L		12/08/16 11:30	12/09/16 16:37	1
Lead	0.038		0.010		mg/L		12/08/16 11:30	12/09/16 16:37	1
Magnesium	1.1		0.20		mg/L		12/08/16 11:30	12/09/16 16:37	1
Manganese	0.23		0.0030		mg/L		12/08/16 11:30	12/09/16 16:37	1
Nickel	0.037		0.010		mg/L		12/08/16 11:30	12/09/16 16:37	1
Potassium	1.6		0.50		mg/L		12/08/16 11:30	12/09/16 16:37	1
Selenium	ND		0.025		mg/L		12/08/16 11:30	12/09/16 16:37	1
Silver	ND		0.0060		mg/L		12/08/16 11:30	12/09/16 16:37	1
Sodium	506		1.0		mg/L		12/08/16 11:30	12/09/16 16:37	1
Thallium	ND		0.020		mg/L		12/08/16 11:30	12/09/16 16:37	1
Vanadium	0.037		0.0050		mg/L		12/08/16 11:30	12/09/16 16:37	1
Zinc	0.035		0.010		mg/L		12/08/16 11:30	12/09/16 16:37	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		12/09/16 08:25	12/09/16 13:47	1

Client Sample ID: WG-080987-120516-BP-005

Lab Sample ID: 480-110656-5

Date Collected: 12/05/16 15:40

Matrix: Water

Date Received: 12/07/16 09:30

MW-5

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		10		ug/L			12/08/16 13:05	10
1,1,2,2-Tetrachloroethane	ND		10		ug/L			12/08/16 13:05	10
1,1,2-Trichloroethane	ND		10		ug/L			12/08/16 13:05	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		10		ug/L			12/08/16 13:05	10
1,1-Dichloroethane	ND		10		ug/L			12/08/16 13:05	10
1,1-Dichloroethene	ND		10		ug/L			12/08/16 13:05	10
1,2,4-Trichlorobenzene	ND		10		ug/L			12/08/16 13:05	10
1,2-Dibromo-3-Chloropropane	ND		10		ug/L			12/08/16 13:05	10
1,2-Dichlorobenzene	ND		10		ug/L			12/08/16 13:05	10
1,2-Dichloroethane	ND		10		ug/L			12/08/16 13:05	10
1,2-Dichloropropane	ND		10		ug/L			12/08/16 13:05	10
1,3-Dichlorobenzene	ND		10		ug/L			12/08/16 13:05	10
1,4-Dichlorobenzene	ND		10		ug/L			12/08/16 13:05	10
2-Butanone (MEK)	ND		100		ug/L			12/08/16 13:05	10
2-Hexanone	ND		50		ug/L			12/08/16 13:05	10
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			12/08/16 13:05	10
Acetone	ND		100		ug/L			12/08/16 13:05	10
Benzene	ND		10		ug/L			12/08/16 13:05	10
Bromodichloromethane	ND		10		ug/L			12/08/16 13:05	10
Bromoform	ND		10		ug/L			12/08/16 13:05	10
Bromomethane	ND		10		ug/L			12/08/16 13:05	10
Carbon disulfide	ND		10		ug/L			12/08/16 13:05	10

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-005

Lab Sample ID: 480-110656-5

Date Collected: 12/05/16 15:40

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		10		ug/L			12/08/16 13:05	10
Chlorobenzene	ND		10		ug/L			12/08/16 13:05	10
Dibromochloromethane	ND		10		ug/L			12/08/16 13:05	10
Chloroethane	ND		10		ug/L			12/08/16 13:05	10
Chloroform	ND		10		ug/L			12/08/16 13:05	10
Chloromethane	ND		10		ug/L			12/08/16 13:05	10
cis-1,2-Dichloroethene	270		10		ug/L			12/08/16 13:05	10
cis-1,3-Dichloropropene	ND		10		ug/L			12/08/16 13:05	10
Cyclohexane	ND		10		ug/L			12/08/16 13:05	10
Dichlorodifluoromethane	ND		10		ug/L			12/08/16 13:05	10
Ethylbenzene	ND		10		ug/L			12/08/16 13:05	10
1,2-Dibromoethane	ND		10		ug/L			12/08/16 13:05	10
Isopropylbenzene	ND		10		ug/L			12/08/16 13:05	10
Methyl acetate	ND		25		ug/L			12/08/16 13:05	10
Methyl tert-butyl ether	ND		10		ug/L			12/08/16 13:05	10
Methylcyclohexane	ND		10		ug/L			12/08/16 13:05	10
Methylene Chloride	ND		10		ug/L			12/08/16 13:05	10
Styrene	ND		10		ug/L			12/08/16 13:05	10
Tetrachloroethene	ND		10		ug/L			12/08/16 13:05	10
Toluene	ND		10		ug/L			12/08/16 13:05	10
trans-1,2-Dichloroethene	ND		10		ug/L			12/08/16 13:05	10
trans-1,3-Dichloropropene	ND		10		ug/L			12/08/16 13:05	10
Trichloroethene	ND		10		ug/L			12/08/16 13:05	10
Trichlorofluoromethane	ND		10		ug/L			12/08/16 13:05	10
Vinyl chloride	36		10		ug/L			12/08/16 13:05	10
Xylenes, Total	ND		20		ug/L			12/08/16 13:05	10

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/08/16 13:05	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120					12/08/16 13:05	10
1,2-Dichloroethane-d4 (Surr)	102		77 - 120					12/08/16 13:05	10
4-Bromofluorobenzene (Surr)	93		73 - 120					12/08/16 13:05	10
Dibromofluoromethane (Surr)	104		75 - 123					12/08/16 13:05	10

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
2,4,6-Trichlorophenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
2,4-Dichlorophenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
2,4-Dimethylphenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
2,4-Dinitrophenol	ND		9.7		ug/L		12/09/16 06:12	12/15/16 00:36	1
2,4-Dinitrotoluene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
2,6-Dinitrotoluene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
2-Chloronaphthalene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
2-Chlorophenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
2-Methylnaphthalene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
2-Methylphenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
2-Nitroaniline	ND		9.7		ug/L		12/09/16 06:12	12/15/16 00:36	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-005

Lab Sample ID: 480-110656-5

Date Collected: 12/05/16 15:40

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrophenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
3,3'-Dichlorobenzidine	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
3-Nitroaniline	ND		9.7		ug/L		12/09/16 06:12	12/15/16 00:36	1
4,6-Dinitro-2-methylphenol	ND		9.7		ug/L		12/09/16 06:12	12/15/16 00:36	1
4-Bromophenyl phenyl ether	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
4-Chloro-3-methylphenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
4-Chloroaniline	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
4-Chlorophenyl phenyl ether	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
4-Methylphenol	ND		9.7		ug/L		12/09/16 06:12	12/15/16 00:36	1
4-Nitroaniline	ND		9.7		ug/L		12/09/16 06:12	12/15/16 00:36	1
4-Nitrophenol	ND		9.7		ug/L		12/09/16 06:12	12/15/16 00:36	1
Acenaphthene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Acenaphthylene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Acetophenone	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Anthracene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Atrazine	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Benzaldehyde	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Benzo[a]anthracene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Benzo[a]pyrene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Benzo[b]fluoranthene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Benzo[g,h,i]perylene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Benzo[k]fluoranthene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Biphenyl	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
bis (2-chloroisopropyl) ether	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Bis(2-chloroethoxy)methane	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Bis(2-chloroethyl)ether	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Bis(2-ethylhexyl) phthalate	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Butyl benzyl phthalate	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Caprolactam	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Carbazole	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Chrysene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Dibenz(a,h)anthracene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Dibenzofuran	ND		9.7		ug/L		12/09/16 06:12	12/15/16 00:36	1
Diethyl phthalate	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Dimethyl phthalate	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Di-n-butyl phthalate	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Di-n-octyl phthalate	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Fluoranthene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Fluorene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Hexachlorobenzene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Hexachlorobutadiene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Hexachlorocyclopentadiene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Hexachloroethane	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Indeno[1,2,3-cd]pyrene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Isophorone	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Naphthalene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Nitrobenzene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
N-Nitrosodi-n-propylamine	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
N-Nitrosodiphenylamine	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-005

Lab Sample ID: 480-110656-5

Date Collected: 12/05/16 15:40

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		9.7		ug/L		12/09/16 06:12	12/15/16 00:36	1
Phenanthrene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Phenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1
Pyrene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 00:36	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	87	T J	ug/L		2.50		12/09/16 06:12	12/15/16 00:36	1
Unknown	2.1	T J	ug/L		2.55		12/09/16 06:12	12/15/16 00:36	1
Toluene	7.2	T J N	ug/L		3.50	108-88-3	12/09/16 06:12	12/15/16 00:36	1
Unknown	65	T J	ug/L		4.34		12/09/16 06:12	12/15/16 00:36	1
Ethylbenzene	2.3	T J N	ug/L		4.57	100-41-4	12/09/16 06:12	12/15/16 00:36	1
Benzene, 1,3-dimethyl-	6.6	T J N	ug/L		4.67	108-38-3	12/09/16 06:12	12/15/16 00:36	1
Cyclotetrasiloxane, octamethyl-	5.0	T J N	ug/L		5.61	556-67-2	12/09/16 06:12	12/15/16 00:36	1
Cyclopentasiloxane, decamethyl-	5.3	T J N	ug/L		6.59	541-02-6	12/09/16 06:12	12/15/16 00:36	1
Pentasiloxane, dodecamethyl-	2.0	T J N	ug/L		7.05	141-63-9	12/09/16 06:12	12/15/16 00:36	1
Cyclohexasiloxane, dodecamethyl-	3.0	T J N	ug/L		7.46	540-97-6	12/09/16 06:12	12/15/16 00:36	1
Hexasiloxane, tetradecamethyl-	3.0	T J N	ug/L		7.83	107-52-8	12/09/16 06:12	12/15/16 00:36	1
Unknown	9.1	T J	ug/L		8.31		12/09/16 06:12	12/15/16 00:36	1
Unknown	3.2	T J	ug/L		8.51		12/09/16 06:12	12/15/16 00:36	1
Unknown	3.5	T J	ug/L		9.11		12/09/16 06:12	12/15/16 00:36	1
n-Hexadecanoic acid	3.3	T J N	ug/L		10.09	57-10-3	12/09/16 06:12	12/15/16 00:36	1
Unknown	3.8	T J	ug/L		10.15		12/09/16 06:12	12/15/16 00:36	1
Unknown	4.0	T J	ug/L		11.02		12/09/16 06:12	12/15/16 00:36	1
Unknown	3.6	T J	ug/L		11.89		12/09/16 06:12	12/15/16 00:36	1
Unknown	3.1	T J	ug/L		12.37		12/09/16 06:12	12/15/16 00:36	1
Unknown	2.2	T J	ug/L		12.91		12/09/16 06:12	12/15/16 00:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		52 - 132	12/09/16 06:12	12/15/16 00:36	1
2-Fluorobiphenyl	74		48 - 120	12/09/16 06:12	12/15/16 00:36	1
2-Fluorophenol (Surr)	59		20 - 120	12/09/16 06:12	12/15/16 00:36	1
Nitrobenzene-d5 (Surr)	75		46 - 120	12/09/16 06:12	12/15/16 00:36	1
Phenol-d5 (Surr)	46		16 - 120	12/09/16 06:12	12/15/16 00:36	1
p-Terphenyl-d14 (Surr)	91		67 - 150	12/09/16 06:12	12/15/16 00:36	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.46		ug/L		12/08/16 06:26	12/09/16 07:06	1
PCB-1221	ND		0.46		ug/L		12/08/16 06:26	12/09/16 07:06	1
PCB-1232	ND		0.46		ug/L		12/08/16 06:26	12/09/16 07:06	1
PCB-1242	ND		0.46		ug/L		12/08/16 06:26	12/09/16 07:06	1
PCB-1248	ND		0.46		ug/L		12/08/16 06:26	12/09/16 07:06	1
PCB-1254	ND		0.46		ug/L		12/08/16 06:26	12/09/16 07:06	1
PCB-1260	ND		0.46		ug/L		12/08/16 06:26	12/09/16 07:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	67		19 - 120	12/08/16 06:26	12/09/16 07:06	1
DCB Decachlorobiphenyl	78		19 - 120	12/08/16 06:26	12/09/16 07:06	1
Tetrachloro-m-xylene	51		39 - 121	12/08/16 06:26	12/09/16 07:06	1
Tetrachloro-m-xylene	62		39 - 121	12/08/16 06:26	12/09/16 07:06	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-005

Lab Sample ID: 480-110656-5

Date Collected: 12/05/16 15:40

Matrix: Water

Date Received: 12/07/16 09:30

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.7		0.20		mg/L		12/08/16 11:30	12/09/16 17:04	1
Antimony	ND		0.020		mg/L		12/08/16 11:30	12/09/16 17:04	1
Arsenic	ND		0.015		mg/L		12/08/16 11:30	12/09/16 17:04	1
Barium	0.20		0.0020		mg/L		12/08/16 11:30	12/09/16 17:04	1
Beryllium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 17:04	1
Cadmium	0.0055		0.0020		mg/L		12/08/16 11:30	12/09/16 17:04	1
Calcium	107		0.50		mg/L		12/08/16 11:30	12/09/16 17:04	1
Chromium	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 17:04	1
Cobalt	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 17:04	1
Copper	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:04	1
Iron	5.7		0.050		mg/L		12/08/16 11:30	12/09/16 17:04	1
Lead	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:04	1
Magnesium	36.3		0.20		mg/L		12/08/16 11:30	12/09/16 17:04	1
Manganese	1.6		0.0030		mg/L		12/08/16 11:30	12/09/16 17:04	1
Nickel	0.011		0.010		mg/L		12/08/16 11:30	12/09/16 17:04	1
Potassium	9.2	A	0.50		mg/L		12/08/16 11:30	12/09/16 17:04	1
Selenium	ND		0.025		mg/L		12/08/16 11:30	12/09/16 17:04	1
Silver	ND		0.0060		mg/L		12/08/16 11:30	12/09/16 17:04	1
Sodium	88.1	A	1.0		mg/L		12/08/16 11:30	12/09/16 17:04	1
Thallium	ND		0.020		mg/L		12/08/16 11:30	12/09/16 17:04	1
Vanadium	ND		0.0050		mg/L		12/08/16 11:30	12/09/16 17:04	1
Zinc	0.11		0.010		mg/L		12/08/16 11:30	12/09/16 17:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		12/09/16 08:25	12/09/16 13:59	1

Client Sample ID: WG-080987-120516-BP-006

Lab Sample ID: 480-110656-6

Date Collected: 12/05/16 16:45

Matrix: Water

Date Received: 12/07/16 09:30

MW-5S

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			12/08/16 13:28	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			12/08/16 13:28	1
1,1,2-Trichloroethane	ND		1.0		ug/L			12/08/16 13:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			12/08/16 13:28	1
1,1-Dichloroethane	ND		1.0		ug/L			12/08/16 13:28	1
1,1-Dichloroethene	ND		1.0		ug/L			12/08/16 13:28	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			12/08/16 13:28	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			12/08/16 13:28	1
1,2-Dichlorobenzene	ND		1.0		ug/L			12/08/16 13:28	1
1,2-Dichloroethane	ND		1.0		ug/L			12/08/16 13:28	1
1,2-Dichloropropane	ND		1.0		ug/L			12/08/16 13:28	1
1,3-Dichlorobenzene	ND		1.0		ug/L			12/08/16 13:28	1
1,4-Dichlorobenzene	ND		1.0		ug/L			12/08/16 13:28	1
2-Butanone (MEK)	ND		10		ug/L			12/08/16 13:28	1
2-Hexanone	ND		5.0		ug/L			12/08/16 13:28	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			12/08/16 13:28	1
Acetone	ND		10		ug/L			12/08/16 13:28	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-006

Lab Sample ID: 480-110656-6

Date Collected: 12/05/16 16:45

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4.4		1.0		ug/L			12/08/16 13:28	1
Bromodichloromethane	ND		1.0		ug/L			12/08/16 13:28	1
Bromoform	ND		1.0		ug/L			12/08/16 13:28	1
Bromomethane	ND		1.0		ug/L			12/08/16 13:28	1
Carbon disulfide	ND		1.0		ug/L			12/08/16 13:28	1
Carbon tetrachloride	ND		1.0		ug/L			12/08/16 13:28	1
Chlorobenzene	50		1.0		ug/L			12/08/16 13:28	1
Dibromochloromethane	ND		1.0		ug/L			12/08/16 13:28	1
Chloroethane	ND		1.0		ug/L			12/08/16 13:28	1
Chloroform	ND		1.0		ug/L			12/08/16 13:28	1
Chloromethane	ND		1.0		ug/L			12/08/16 13:28	1
cis-1,2-Dichloroethene	49		1.0		ug/L			12/08/16 13:28	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 13:28	1
Cyclohexane	ND		1.0		ug/L			12/08/16 13:28	1
Dichlorodifluoromethane	ND		1.0		ug/L			12/08/16 13:28	1
Ethylbenzene	5.3		1.0		ug/L			12/08/16 13:28	1
1,2-Dibromoethane	ND		1.0		ug/L			12/08/16 13:28	1
Isopropylbenzene	ND		1.0		ug/L			12/08/16 13:28	1
Methyl acetate	ND		2.5		ug/L			12/08/16 13:28	1
Methyl tert-butyl ether	ND		1.0		ug/L			12/08/16 13:28	1
Methylcyclohexane	ND		1.0		ug/L			12/08/16 13:28	1
Methylene Chloride	ND		1.0		ug/L			12/08/16 13:28	1
Styrene	ND		1.0		ug/L			12/08/16 13:28	1
Tetrachloroethene	ND		1.0		ug/L			12/08/16 13:28	1
Toluene	15		1.0		ug/L			12/08/16 13:28	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			12/08/16 13:28	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 13:28	1
Trichloroethene	ND		1.0		ug/L			12/08/16 13:28	1
Trichlorofluoromethane	ND		1.0		ug/L			12/08/16 13:28	1
Vinyl chloride	53		1.0		ug/L			12/08/16 13:28	1
Xylenes, Total	16		2.0		ug/L			12/08/16 13:28	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/08/16 13:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120		12/08/16 13:28	1
1,2-Dichloroethane-d4 (Surr)	103		77 - 120		12/08/16 13:28	1
4-Bromofluorobenzene (Surr)	93		73 - 120		12/08/16 13:28	1
Dibromofluoromethane (Surr)	105		75 - 123		12/08/16 13:28	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
2,4,6-Trichlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
2,4-Dichlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
2,4-Dimethylphenol	8.7		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
2,4-Dinitrophenol	ND		9.4		ug/L		12/09/16 06:12	12/15/16 02:56	1
2,4-Dinitrotoluene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
2,6-Dinitrotoluene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-006

Lab Sample ID: 480-110656-6

Date Collected: 12/05/16 16:45

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
2-Chlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
2-Methylnaphthalene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
2-Methylphenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
2-Nitroaniline	ND		9.4		ug/L		12/09/16 06:12	12/15/16 02:56	1
2-Nitrophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
3,3'-Dichlorobenzidine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
3-Nitroaniline	ND		9.4		ug/L		12/09/16 06:12	12/15/16 02:56	1
4,6-Dinitro-2-methylphenol	ND		9.4		ug/L		12/09/16 06:12	12/15/16 02:56	1
4-Bromophenyl phenyl ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
4-Chloro-3-methylphenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
4-Chloroaniline	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
4-Chlorophenyl phenyl ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
4-Methylphenol	ND		9.4		ug/L		12/09/16 06:12	12/15/16 02:56	1
4-Nitroaniline	ND		9.4		ug/L		12/09/16 06:12	12/15/16 02:56	1
4-Nitrophenol	ND		9.4		ug/L		12/09/16 06:12	12/15/16 02:56	1
Acenaphthene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Acenaphthylene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Acetophenone	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Anthracene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Atrazine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Benzaldehyde	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Benzo[a]anthracene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Benzo[a]pyrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Benzo[b]fluoranthene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Benzo[g,h,i]perylene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Benzo[k]fluoranthene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Biphenyl	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
bis (2-chloroisopropyl) ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Bis(2-chloroethoxy)methane	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Bis(2-chloroethyl)ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Bis(2-ethylhexyl) phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Butyl benzyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Caprolactam	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Carbazole	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Chrysene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Dibenz(a,h)anthracene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Dibenzofuran	ND		9.4		ug/L		12/09/16 06:12	12/15/16 02:56	1
Diethyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Dimethyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Di-n-butyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Di-n-octyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Fluoranthene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Fluorene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Hexachlorobenzene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Hexachlorobutadiene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Hexachlorocyclopentadiene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Hexachloroethane	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Indeno[1,2,3-cd]pyrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-006

Lab Sample ID: 480-110656-6

Date Collected: 12/05/16 16:45

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isophorone	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Naphthalene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Nitrobenzene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
N-Nitrosodi-n-propylamine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
N-Nitrosodiphenylamine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Pentachlorophenol	ND		9.4		ug/L		12/09/16 06:12	12/15/16 02:56	1
Phenanthrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Phenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1
Pyrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 02:56	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	3.5	T J	ug/L		2.46		12/09/16 06:12	12/15/16 02:56	1
Unknown	97	T J	ug/L		2.53		12/09/16 06:12	12/15/16 02:56	1
Unknown	5.1	T J	ug/L		2.57		12/09/16 06:12	12/15/16 02:56	1
Toluene	15	T J N	ug/L		3.52	108-88-3	12/09/16 06:12	12/15/16 02:56	1
Unknown	68	T J	ug/L		4.36		12/09/16 06:12	12/15/16 02:56	1
Benzene, chloro-	34	T J N	ug/L		4.44	108-90-7	12/09/16 06:12	12/15/16 02:56	1
Ethylbenzene	6.4	T J N	ug/L		4.59	100-41-4	12/09/16 06:12	12/15/16 02:56	1
p-Xylene	13	T J N	ug/L		4.67	106-42-3	12/09/16 06:12	12/15/16 02:56	1
Cyclotetrasiloxane, octamethyl-	3.1	T J N	ug/L		5.61	556-67-2	12/09/16 06:12	12/15/16 02:56	1
Unknown	3.3	T J	ug/L		5.74		12/09/16 06:12	12/15/16 02:56	1
Unknown	3.7	T J	ug/L		6.58		12/09/16 06:12	12/15/16 02:56	1
Unknown	2.4	T J	ug/L		7.28		12/09/16 06:12	12/15/16 02:56	1
Phenol, p-tert-butyl-	16	T J N	ug/L		7.45	98-54-4	12/09/16 06:12	12/15/16 02:56	1
Phenol, 4-(1,1-dimethylpropyl)-	2.2	T J N	ug/L		7.96	80-46-6	12/09/16 06:12	12/15/16 02:56	1
Diphenyl ether	4.2	T J N	ug/L		8.03	101-84-8	12/09/16 06:12	12/15/16 02:56	1
Unknown	7.4	T J	ug/L		8.83		12/09/16 06:12	12/15/16 02:56	1
Phenol, (1,1,3,3-tetramethylbutyl)-	23	T J N	ug/L		8.86	27193-28-8	12/09/16 06:12	12/15/16 02:56	1
n-Hexadecanoic acid	9.5	T J N	ug/L		10.10	57-10-3	12/09/16 06:12	12/15/16 02:56	1
Octadecanoic acid	4.1	T J N	ug/L		10.74	57-11-4	12/09/16 06:12	12/15/16 02:56	1
Phenol, 4,4'-(1-methylethylidene)bis-	4.3	T J N	ug/L		10.85	80-05-7	12/09/16 06:12	12/15/16 02:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	115		52 - 132	12/09/16 06:12	12/15/16 02:56	1
2-Fluorobiphenyl	96		48 - 120	12/09/16 06:12	12/15/16 02:56	1
2-Fluorophenol (Surr)	80		20 - 120	12/09/16 06:12	12/15/16 02:56	1
Nitrobenzene-d5 (Surr)	95		46 - 120	12/09/16 06:12	12/15/16 02:56	1
Phenol-d5 (Surr)	58		16 - 120	12/09/16 06:12	12/15/16 02:56	1
p-Terphenyl-d14 (Surr)	99		67 - 150	12/09/16 06:12	12/15/16 02:56	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.46		ug/L		12/08/16 06:26	12/09/16 07:22	1
PCB-1221	ND		0.46		ug/L		12/08/16 06:26	12/09/16 07:22	1
PCB-1232	1.3		0.46		ug/L		12/08/16 06:26	12/09/16 07:22	1
PCB-1242	ND		0.46		ug/L		12/08/16 06:26	12/09/16 07:22	1
PCB-1248	ND		0.46		ug/L		12/08/16 06:26	12/09/16 07:22	1
PCB-1254	ND		0.46		ug/L		12/08/16 06:26	12/09/16 07:22	1
PCB-1260	ND		0.46		ug/L		12/08/16 06:26	12/09/16 07:22	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-006

Lab Sample ID: 480-110656-6

Date Collected: 12/05/16 16:45

Matrix: Water

Date Received: 12/07/16 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	81		19 - 120	12/08/16 06:26	12/09/16 07:22	1
DCB Decachlorobiphenyl	89		19 - 120	12/08/16 06:26	12/09/16 07:22	1
Tetrachloro-m-xylene	94		39 - 121	12/08/16 06:26	12/09/16 07:22	1
Tetrachloro-m-xylene	81		39 - 121	12/08/16 06:26	12/09/16 07:22	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20		mg/L		12/08/16 11:30	12/09/16 17:08	1
Antimony	ND		0.020		mg/L		12/08/16 11:30	12/09/16 17:08	1
Arsenic	0.016		0.015		mg/L		12/08/16 11:30	12/09/16 17:08	1
Barium	0.23		0.0020		mg/L		12/08/16 11:30	12/09/16 17:08	1
Beryllium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 17:08	1
Cadmium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 17:08	1
Calcium	53.3		0.50		mg/L		12/08/16 11:30	12/09/16 17:08	1
Chromium	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 17:08	1
Cobalt	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 17:08	1
Copper	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:08	1
Iron	9.6		0.050		mg/L		12/08/16 11:30	12/09/16 17:08	1
Lead	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:08	1
Magnesium	9.7		0.20		mg/L		12/08/16 11:30	12/09/16 17:08	1
Manganese	4.5		0.0030		mg/L		12/08/16 11:30	12/09/16 17:08	1
Nickel	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:08	1
Potassium	2.8		0.50		mg/L		12/08/16 11:30	12/12/16 13:26	1
Selenium	ND		0.025		mg/L		12/08/16 11:30	12/09/16 17:08	1
Silver	ND		0.0060		mg/L		12/08/16 11:30	12/09/16 17:08	1
Sodium	99.3		1.0		mg/L		12/08/16 11:30	12/12/16 13:26	1
Thallium	ND		0.020		mg/L		12/08/16 11:30	12/09/16 17:08	1
Vanadium	ND		0.0050		mg/L		12/08/16 11:30	12/09/16 17:08	1
Zinc	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		12/09/16 08:25	12/09/16 14:01	1

Client Sample ID: WG-080987-120516-BP-007

Lab Sample ID: 480-110656-7

Date Collected: 12/05/16 16:46

Matrix: Water

Date Received: 12/07/16 09:30

MW-5S (Dup)

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			12/08/16 13:51	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			12/08/16 13:51	1
1,1,2-Trichloroethane	ND		1.0		ug/L			12/08/16 13:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			12/08/16 13:51	1
1,1-Dichloroethane	ND		1.0		ug/L			12/08/16 13:51	1
1,1-Dichloroethene	ND		1.0		ug/L			12/08/16 13:51	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			12/08/16 13:51	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			12/08/16 13:51	1
1,2-Dichlorobenzene	ND		1.0		ug/L			12/08/16 13:51	1
1,2-Dichloroethane	ND		1.0		ug/L			12/08/16 13:51	1
1,2-Dichloropropane	ND		1.0		ug/L			12/08/16 13:51	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperaage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-007

Lab Sample ID: 480-110656-7

Date Collected: 12/05/16 16:46

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0		ug/L			12/08/16 13:51	1
1,4-Dichlorobenzene	ND		1.0		ug/L			12/08/16 13:51	1
2-Butanone (MEK)	ND		10		ug/L			12/08/16 13:51	1
2-Hexanone	ND		5.0		ug/L			12/08/16 13:51	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			12/08/16 13:51	1
Acetone	ND		10		ug/L			12/08/16 13:51	1
Benzene	4.1		1.0		ug/L			12/08/16 13:51	1
Bromodichloromethane	ND		1.0		ug/L			12/08/16 13:51	1
Bromoform	ND		1.0		ug/L			12/08/16 13:51	1
Bromomethane	ND		1.0		ug/L			12/08/16 13:51	1
Carbon disulfide	ND		1.0		ug/L			12/08/16 13:51	1
Carbon tetrachloride	ND		1.0		ug/L			12/08/16 13:51	1
Chlorobenzene	50		1.0		ug/L			12/08/16 13:51	1
Dibromochloromethane	ND		1.0		ug/L			12/08/16 13:51	1
Chloroethane	ND		1.0		ug/L			12/08/16 13:51	1
Chloroform	ND		1.0		ug/L			12/08/16 13:51	1
Chloromethane	ND		1.0		ug/L			12/08/16 13:51	1
cis-1,2-Dichloroethene	47		1.0		ug/L			12/08/16 13:51	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 13:51	1
Cyclohexane	ND		1.0		ug/L			12/08/16 13:51	1
Dichlorodifluoromethane	ND		1.0		ug/L			12/08/16 13:51	1
Ethylbenzene	5.2		1.0		ug/L			12/08/16 13:51	1
1,2-Dibromoethane	ND		1.0		ug/L			12/08/16 13:51	1
Isopropylbenzene	ND		1.0		ug/L			12/08/16 13:51	1
Methyl acetate	ND		2.5		ug/L			12/08/16 13:51	1
Methyl tert-butyl ether	ND		1.0		ug/L			12/08/16 13:51	1
Methylcyclohexane	ND		1.0		ug/L			12/08/16 13:51	1
Methylene Chloride	ND		1.0		ug/L			12/08/16 13:51	1
Styrene	ND		1.0		ug/L			12/08/16 13:51	1
Tetrachloroethene	ND		1.0		ug/L			12/08/16 13:51	1
Toluene	16		1.0		ug/L			12/08/16 13:51	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			12/08/16 13:51	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 13:51	1
Trichloroethene	ND		1.0		ug/L			12/08/16 13:51	1
Trichlorofluoromethane	ND		1.0		ug/L			12/08/16 13:51	1
Vinyl chloride	50		1.0		ug/L			12/08/16 13:51	1
Xylenes, Total	16		2.0		ug/L			12/08/16 13:51	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/08/16 13:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 120		12/08/16 13:51	1
1,2-Dichloroethane-d4 (Surr)	101		77 - 120		12/08/16 13:51	1
4-Bromofluorobenzene (Surr)	94		73 - 120		12/08/16 13:51	1
Dibromofluoromethane (Surr)	100		75 - 123		12/08/16 13:51	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-007

Lab Sample ID: 480-110656-7

Date Collected: 12/05/16 16:46

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
2,4-Dichlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
2,4-Dimethylphenol	9.2		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
2,4-Dinitrophenol	ND		9.4		ug/L		12/09/16 06:12	12/15/16 03:24	1
2,4-Dinitrotoluene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
2,6-Dinitrotoluene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
2-Chloronaphthalene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
2-Chlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
2-Methylnaphthalene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
2-Methylphenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
2-Nitroaniline	ND		9.4		ug/L		12/09/16 06:12	12/15/16 03:24	1
2-Nitrophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
3,3'-Dichlorobenzidine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
3-Nitroaniline	ND		9.4		ug/L		12/09/16 06:12	12/15/16 03:24	1
4,6-Dinitro-2-methylphenol	ND		9.4		ug/L		12/09/16 06:12	12/15/16 03:24	1
4-Bromophenyl phenyl ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
4-Chloro-3-methylphenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
4-Chloroaniline	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
4-Chlorophenyl phenyl ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
4-Methylphenol	ND		9.4		ug/L		12/09/16 06:12	12/15/16 03:24	1
4-Nitroaniline	ND		9.4		ug/L		12/09/16 06:12	12/15/16 03:24	1
4-Nitrophenol	ND		9.4		ug/L		12/09/16 06:12	12/15/16 03:24	1
Acenaphthene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Acenaphthylene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Acetophenone	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Anthracene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Atrazine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Benzaldehyde	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Benzo[a]anthracene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Benzo[a]pyrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Benzo[b]fluoranthene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Benzo[g,h,i]perylene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Benzo[k]fluoranthene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Biphenyl	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
bis (2-chloroisopropyl) ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Bis(2-chloroethoxy)methane	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Bis(2-chloroethyl)ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Bis(2-ethylhexyl) phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Butyl benzyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Caprolactam	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Carbazole	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Chrysene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Dibenz[a,h]anthracene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Dibenzofuran	ND		9.4		ug/L		12/09/16 06:12	12/15/16 03:24	1
Diethyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Dimethyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Di-n-butyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Di-n-octyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Fluoranthene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-007

Lab Sample ID: 480-110656-7

Date Collected: 12/05/16 16:46

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Hexachlorobenzene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Hexachlorobutadiene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Hexachlorocyclopentadiene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Hexachloroethane	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Indeno[1,2,3-cd]pyrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Isophorone	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Naphthalene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Nitrobenzene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
N-Nitrosodi-n-propylamine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
N-Nitrosodiphenylamine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Pentachlorophenol	ND		9.4		ug/L		12/09/16 06:12	12/15/16 03:24	1
Phenanthrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Phenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1
Pyrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 03:24	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	86	T J	ug/L		2.52		12/09/16 06:12	12/15/16 03:24	1
Unknown	3.6	T J	ug/L		2.57		12/09/16 06:12	12/15/16 03:24	1
Toluene	12	T J N	ug/L		3.52	108-88-3	12/09/16 06:12	12/15/16 03:24	1
Unknown	58	T J	ug/L		4.35		12/09/16 06:12	12/15/16 03:24	1
Benzene, chloro-	30	T J N	ug/L		4.43	108-90-7	12/09/16 06:12	12/15/16 03:24	1
Unknown	5.6	T J	ug/L		4.58		12/09/16 06:12	12/15/16 03:24	1
p-Xylene	12	T J N	ug/L		4.67	106-42-3	12/09/16 06:12	12/15/16 03:24	1
Unknown	3.0	T J	ug/L		5.74		12/09/16 06:12	12/15/16 03:24	1
Cyclopentasiloxane, decamethyl-	2.4	T J N	ug/L		6.59	541-02-6	12/09/16 06:12	12/15/16 03:24	1
Unknown	2.4	T J	ug/L		7.28		12/09/16 06:12	12/15/16 03:24	1
Phenol, p-tert-butyl-	15	T J N	ug/L		7.45	98-54-4	12/09/16 06:12	12/15/16 03:24	1
Diphenyl ether	3.9	T J N	ug/L		8.03	101-84-8	12/09/16 06:12	12/15/16 03:24	1
Unknown	7.0	T J	ug/L		8.83		12/09/16 06:12	12/15/16 03:24	1
Phenol, (1,1,3,3-tetramethylbutyl)-	22	T J N	ug/L		8.86	27193-28-8	12/09/16 06:12	12/15/16 03:24	1
n-Hexadecanoic acid	17	T J N	ug/L		10.10	57-10-3	12/09/16 06:12	12/15/16 03:24	1
Octadecanoic acid	7.3	T J N	ug/L		10.74	57-11-4	12/09/16 06:12	12/15/16 03:24	1
Phenol, 4,4'-(1-methylethylidene)bis-	4.5	T J N	ug/L		10.86	80-05-7	12/09/16 06:12	12/15/16 03:24	1
Unknown	2.4	T J	ug/L		11.48		12/09/16 06:12	12/15/16 03:24	1
Unknown	2.4	T J	ug/L		12.04		12/09/16 06:12	12/15/16 03:24	1
Unknown	2.7	T J	ug/L		13.08		12/09/16 06:12	12/15/16 03:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	114		52 - 132	12/09/16 06:12	12/15/16 03:24	1
2-Fluorobiphenyl	91		48 - 120	12/09/16 06:12	12/15/16 03:24	1
2-Fluorophenol (Surr)	73		20 - 120	12/09/16 06:12	12/15/16 03:24	1
Nitrobenzene-d5 (Surr)	88		46 - 120	12/09/16 06:12	12/15/16 03:24	1
Phenol-d5 (Surr)	54		16 - 120	12/09/16 06:12	12/15/16 03:24	1
p-Terphenyl-d14 (Surr)	95		67 - 150	12/09/16 06:12	12/15/16 03:24	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.47		ug/L		12/08/16 06:26	12/09/16 07:37	1
PCB-1221	ND		0.47		ug/L		12/08/16 06:26	12/09/16 07:37	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120516-BP-007

Lab Sample ID: 480-110656-7

Date Collected: 12/05/16 16:46

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1232	1.2		0.47		ug/L		12/08/16 06:26	12/09/16 07:37	1
PCB-1242	ND		0.47		ug/L		12/08/16 06:26	12/09/16 07:37	1
PCB-1248	ND		0.47		ug/L		12/08/16 06:26	12/09/16 07:37	1
PCB-1254	ND		0.47		ug/L		12/08/16 06:26	12/09/16 07:37	1
PCB-1260	ND		0.47		ug/L		12/08/16 06:26	12/09/16 07:37	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	81		19 - 120				12/08/16 06:26	12/09/16 07:37	1
DCB Decachlorobiphenyl	90		19 - 120				12/08/16 06:26	12/09/16 07:37	1
Tetrachloro-m-xylene	95		39 - 121				12/08/16 06:26	12/09/16 07:37	1
Tetrachloro-m-xylene	82		39 - 121				12/08/16 06:26	12/09/16 07:37	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20		mg/L		12/08/16 11:30	12/09/16 17:11	1
Antimony	ND		0.020		mg/L		12/08/16 11:30	12/09/16 17:11	1
Arsenic	0.016		0.015		mg/L		12/08/16 11:30	12/09/16 17:11	1
Barium	0.22		0.0020		mg/L		12/08/16 11:30	12/09/16 17:11	1
Beryllium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 17:11	1
Cadmium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 17:11	1
Calcium	51.5		0.50		mg/L		12/08/16 11:30	12/09/16 17:11	1
Chromium	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 17:11	1
Cobalt	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 17:11	1
Copper	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:11	1
Iron	9.4		0.050		mg/L		12/08/16 11:30	12/09/16 17:11	1
Lead	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:11	1
Magnesium	9.3		0.20		mg/L		12/08/16 11:30	12/09/16 17:11	1
Manganese	4.3		0.0030		mg/L		12/08/16 11:30	12/09/16 17:11	1
Nickel	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:11	1
Potassium	2.7		0.50		mg/L		12/08/16 11:30	12/12/16 13:30	1
Selenium	ND		0.025		mg/L		12/08/16 11:30	12/09/16 17:11	1
Silver	ND		0.0060		mg/L		12/08/16 11:30	12/09/16 17:11	1
Sodium	96.5		1.0		mg/L		12/08/16 11:30	12/12/16 13:30	1
Thallium	ND		0.020		mg/L		12/08/16 11:30	12/09/16 17:11	1
Vanadium	ND		0.0050		mg/L		12/08/16 11:30	12/09/16 17:11	1
Zinc	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:11	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		12/09/16 08:25	12/09/16 14:02	1

Client Sample ID: WG-080987-120616-BP-008

Lab Sample ID: 480-110656-8

Date Collected: 12/06/16 09:40

Matrix: Water

Date Received: 12/07/16 09:30

MW-2S

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			12/08/16 14:14	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			12/08/16 14:14	1
1,1,2-Trichloroethane	ND		1.0		ug/L			12/08/16 14:14	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-008

Lab Sample ID: 480-110656-8

Date Collected: 12/06/16 09:40

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			12/08/16 14:14	1
1,1-Dichloroethane	ND		1.0		ug/L			12/08/16 14:14	1
1,1-Dichloroethene	ND		1.0		ug/L			12/08/16 14:14	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			12/08/16 14:14	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			12/08/16 14:14	1
1,2-Dichlorobenzene	ND		1.0		ug/L			12/08/16 14:14	1
1,2-Dichloroethane	ND		1.0		ug/L			12/08/16 14:14	1
1,2-Dichloropropane	ND		1.0		ug/L			12/08/16 14:14	1
1,3-Dichlorobenzene	ND		1.0		ug/L			12/08/16 14:14	1
1,4-Dichlorobenzene	ND		1.0		ug/L			12/08/16 14:14	1
2-Butanone (MEK)	ND		10		ug/L			12/08/16 14:14	1
2-Hexanone	ND		5.0		ug/L			12/08/16 14:14	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			12/08/16 14:14	1
Acetone	ND		10		ug/L			12/08/16 14:14	1
Benzene	ND		1.0		ug/L			12/08/16 14:14	1
Bromodichloromethane	ND		1.0		ug/L			12/08/16 14:14	1
Bromoform	ND		1.0		ug/L			12/08/16 14:14	1
Bromomethane	ND		1.0		ug/L			12/08/16 14:14	1
Carbon disulfide	ND		1.0		ug/L			12/08/16 14:14	1
Carbon tetrachloride	ND		1.0		ug/L			12/08/16 14:14	1
Chlorobenzene	ND		1.0		ug/L			12/08/16 14:14	1
Dibromochloromethane	ND		1.0		ug/L			12/08/16 14:14	1
Chloroethane	ND		1.0		ug/L			12/08/16 14:14	1
Chloroform	ND		1.0		ug/L			12/08/16 14:14	1
Chloromethane	ND		1.0		ug/L			12/08/16 14:14	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			12/08/16 14:14	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 14:14	1
Cyclohexane	ND		1.0		ug/L			12/08/16 14:14	1
Dichlorodifluoromethane	ND		1.0		ug/L			12/08/16 14:14	1
Ethylbenzene	1.5		1.0		ug/L			12/08/16 14:14	1
1,2-Dibromoethane	ND		1.0		ug/L			12/08/16 14:14	1
Isopropylbenzene	ND		1.0		ug/L			12/08/16 14:14	1
Methyl acetate	ND		2.5		ug/L			12/08/16 14:14	1
Methyl tert-butyl ether	ND		1.0		ug/L			12/08/16 14:14	1
Methylcyclohexane	ND		1.0		ug/L			12/08/16 14:14	1
Methylene Chloride	ND		1.0		ug/L			12/08/16 14:14	1
Styrene	ND		1.0		ug/L			12/08/16 14:14	1
Tetrachloroethene	ND		1.0		ug/L			12/08/16 14:14	1
Toluene	2.8		1.0		ug/L			12/08/16 14:14	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			12/08/16 14:14	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 14:14	1
Trichloroethene	ND		1.0		ug/L			12/08/16 14:14	1
Trichlorofluoromethane	ND		1.0		ug/L			12/08/16 14:14	1
Vinyl chloride	ND		1.0		ug/L			12/08/16 14:14	1
Xylenes, Total	5.5		2.0		ug/L			12/08/16 14:14	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/08/16 14:14	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-008

Lab Sample ID: 480-110656-8

Date Collected: 12/06/16 09:40

Matrix: Water

Date Received: 12/07/16 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120		12/08/16 14:14	1
1,2-Dichloroethane-d4 (Surr)	105		77 - 120		12/08/16 14:14	1
4-Bromofluorobenzene (Surr)	83		73 - 120		12/08/16 14:14	1
Dibromofluoromethane (Surr)	103		75 - 123		12/08/16 14:14	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
2,4,6-Trichlorophenol	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
2,4-Dichlorophenol	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
2,4-Dimethylphenol	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
2,4-Dinitrophenol	ND		9.3		ug/L		12/09/16 06:12	12/15/16 03:52	1
2,4-Dinitrotoluene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
2,6-Dinitrotoluene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
2-Chloronaphthalene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
2-Chlorophenol	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
2-Methylnaphthalene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
2-Methylphenol	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
2-Nitroaniline	ND		9.3		ug/L		12/09/16 06:12	12/15/16 03:52	1
2-Nitrophenol	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
3,3'-Dichlorobenzidine	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
3-Nitroaniline	ND		9.3		ug/L		12/09/16 06:12	12/15/16 03:52	1
4,6-Dinitro-2-methylphenol	ND		9.3		ug/L		12/09/16 06:12	12/15/16 03:52	1
4-Bromophenyl phenyl ether	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
4-Chloro-3-methylphenol	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
4-Chloroaniline	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
4-Chlorophenyl phenyl ether	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
4-Methylphenol	ND		9.3		ug/L		12/09/16 06:12	12/15/16 03:52	1
4-Nitroaniline	ND		9.3		ug/L		12/09/16 06:12	12/15/16 03:52	1
4-Nitrophenol	ND		9.3		ug/L		12/09/16 06:12	12/15/16 03:52	1
Acenaphthene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Acenaphthylene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Acetophenone	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Anthracene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Atrazine	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Benzaldehyde	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Benzo[a]anthracene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Benzo[a]pyrene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Benzo[b]fluoranthene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Benzo[g,h,i]perylene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Benzo[k]fluoranthene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Biphenyl	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
bis (2-chloroisopropyl) ether	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Bis(2-chloroethoxy)methane	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Bis(2-chloroethyl)ether	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Bis(2-ethylhexyl) phthalate	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Butyl benzyl phthalate	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Caprolactam	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Carbazole	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Chrysene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-008

Lab Sample ID: 480-110656-8

Date Collected: 12/06/16 09:40

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Dibenzofuran	ND		9.3		ug/L		12/09/16 06:12	12/15/16 03:52	1
Diethyl phthalate	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Dimethyl phthalate	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Di-n-butyl phthalate	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Di-n-octyl phthalate	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Fluoranthene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Fluorene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Hexachlorobenzene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Hexachlorobutadiene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Hexachlorocyclopentadiene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Hexachloroethane	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Indeno[1,2,3-cd]pyrene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Isophorone	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Naphthalene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Nitrobenzene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
N-Nitrosodi-n-propylamine	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
N-Nitrosodiphenylamine	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Pentachlorophenol	ND		9.3		ug/L		12/09/16 06:12	12/15/16 03:52	1
Phenanthrene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Phenol	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1
Pyrene	ND		4.6		ug/L		12/09/16 06:12	12/15/16 03:52	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	96	T J	ug/L		2.52		12/09/16 06:12	12/15/16 03:52	1
Toluene	3.9	T J N	ug/L		3.52	108-88-3	12/09/16 06:12	12/15/16 03:52	1
Butanoic acid	1.5	T J N	ug/L		3.70	107-92-6	12/09/16 06:12	12/15/16 03:52	1
Unknown	67	T J	ug/L		4.35		12/09/16 06:12	12/15/16 03:52	1
Ethylbenzene	1.7	T J N	ug/L		4.58	100-41-4	12/09/16 06:12	12/15/16 03:52	1
Benzene, 1,2-dimethyl-	5.2	T J N	ug/L		4.67	95-47-6	12/09/16 06:12	12/15/16 03:52	1
Unknown	2.1	T J	ug/L		5.61		12/09/16 06:12	12/15/16 03:52	1
Cyclopentasiloxane, decamethyl-	1.8	T J N	ug/L		6.58	541-02-6	12/09/16 06:12	12/15/16 03:52	1
Nonanoic acid	3.2	T J N	ug/L		7.28	112-05-0	12/09/16 06:12	12/15/16 03:52	1
Unknown	2.3	T J	ug/L		11.48		12/09/16 06:12	12/15/16 03:52	1
Unknown	2.8	T J	ug/L		12.04		12/09/16 06:12	12/15/16 03:52	1
9-Octadecenamide, (Z)-	3.7	T J N	ug/L		12.88	301-02-0	12/09/16 06:12	12/15/16 03:52	1
Unknown	3.4	T J	ug/L		13.08		12/09/16 06:12	12/15/16 03:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	101		52 - 132	12/09/16 06:12	12/15/16 03:52	1
2-Fluorobiphenyl	90		48 - 120	12/09/16 06:12	12/15/16 03:52	1
2-Fluorophenol (Surr)	72		20 - 120	12/09/16 06:12	12/15/16 03:52	1
Nitrobenzene-d5 (Surr)	90		46 - 120	12/09/16 06:12	12/15/16 03:52	1
Phenol-d5 (Surr)	55		16 - 120	12/09/16 06:12	12/15/16 03:52	1
p-Terphenyl-d14 (Surr)	102		67 - 150	12/09/16 06:12	12/15/16 03:52	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.51		ug/L		12/08/16 06:26	12/09/16 07:52	1
PCB-1221	ND		0.51		ug/L		12/08/16 06:26	12/09/16 07:52	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-008

Lab Sample ID: 480-110656-8

Date Collected: 12/06/16 09:40

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1232	ND		0.51		ug/L		12/08/16 06:26	12/09/16 07:52	1
PCB-1242	ND		0.51		ug/L		12/08/16 06:26	12/09/16 07:52	1
PCB-1248	ND		0.51		ug/L		12/08/16 06:26	12/09/16 07:52	1
PCB-1254	ND		0.51		ug/L		12/08/16 06:26	12/09/16 07:52	1
PCB-1260	ND		0.51		ug/L		12/08/16 06:26	12/09/16 07:52	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	81		19 - 120				12/08/16 06:26	12/09/16 07:52	1
DCB Decachlorobiphenyl	89		19 - 120				12/08/16 06:26	12/09/16 07:52	1
Tetrachloro-m-xylene	79		39 - 121				12/08/16 06:26	12/09/16 07:52	1
Tetrachloro-m-xylene	87		39 - 121				12/08/16 06:26	12/09/16 07:52	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.22		0.20		mg/L		12/08/16 11:30	12/09/16 17:14	1
Antimony	ND		0.020		mg/L		12/08/16 11:30	12/09/16 17:14	1
Arsenic	ND		0.015		mg/L		12/08/16 11:30	12/09/16 17:14	1
Barium	0.044		0.0020		mg/L		12/08/16 11:30	12/09/16 17:14	1
Beryllium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 17:14	1
Cadmium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 17:14	1
Calcium	39.3		0.50		mg/L		12/08/16 11:30	12/09/16 17:14	1
Chromium	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 17:14	1
Cobalt	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 17:14	1
Copper	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:14	1
Iron	0.20		0.050		mg/L		12/08/16 11:30	12/09/16 17:14	1
Lead	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:14	1
Magnesium	6.9		0.20		mg/L		12/08/16 11:30	12/09/16 17:14	1
Manganese	0.0084		0.0030		mg/L		12/08/16 11:30	12/09/16 17:14	1
Nickel	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:14	1
Potassium	4.9		0.50		mg/L		12/08/16 11:30	12/12/16 13:43	1
Selenium	ND		0.025		mg/L		12/08/16 11:30	12/09/16 17:14	1
Silver	ND		0.0060		mg/L		12/08/16 11:30	12/09/16 17:14	1
Sodium	217		1.0		mg/L		12/08/16 11:30	12/12/16 13:43	1
Thallium	ND		0.020		mg/L		12/08/16 11:30	12/09/16 17:14	1
Vanadium	ND		0.0050		mg/L		12/08/16 11:30	12/09/16 17:14	1
Zinc	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:14	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		12/09/16 08:25	12/09/16 14:05	1

Client Sample ID: WG-080987-120616-BP-009

Lab Sample ID: 480-110656-9

Date Collected: 12/06/16 10:40

Matrix: Water

Date Received: 12/07/16 09:30

MW-2

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			12/08/16 14:37	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			12/08/16 14:37	1
1,1,2-Trichloroethane	ND		1.0		ug/L			12/08/16 14:37	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-009

Lab Sample ID: 480-110656-9

Date Collected: 12/06/16 10:40

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			12/08/16 14:37	1
1,1-Dichloroethane	ND		1.0		ug/L			12/08/16 14:37	1
1,1-Dichloroethene	ND		1.0		ug/L			12/08/16 14:37	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			12/08/16 14:37	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			12/08/16 14:37	1
1,2-Dichlorobenzene	ND		1.0		ug/L			12/08/16 14:37	1
1,2-Dichloroethane	ND		1.0		ug/L			12/08/16 14:37	1
1,2-Dichloropropane	ND		1.0		ug/L			12/08/16 14:37	1
1,3-Dichlorobenzene	ND		1.0		ug/L			12/08/16 14:37	1
1,4-Dichlorobenzene	ND		1.0		ug/L			12/08/16 14:37	1
2-Butanone (MEK)	ND		10		ug/L			12/08/16 14:37	1
2-Hexanone	ND		5.0		ug/L			12/08/16 14:37	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			12/08/16 14:37	1
Acetone	ND		10		ug/L			12/08/16 14:37	1
Benzene	ND		1.0		ug/L			12/08/16 14:37	1
Bromodichloromethane	ND		1.0		ug/L			12/08/16 14:37	1
Bromoform	ND		1.0		ug/L			12/08/16 14:37	1
Bromomethane	ND		1.0		ug/L			12/08/16 14:37	1
Carbon disulfide	ND		1.0		ug/L			12/08/16 14:37	1
Carbon tetrachloride	ND		1.0		ug/L			12/08/16 14:37	1
Chlorobenzene	ND		1.0		ug/L			12/08/16 14:37	1
Dibromochloromethane	ND		1.0		ug/L			12/08/16 14:37	1
Chloroethane	ND		1.0		ug/L			12/08/16 14:37	1
Chloroform	ND		1.0		ug/L			12/08/16 14:37	1
Chloromethane	ND		1.0		ug/L			12/08/16 14:37	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			12/08/16 14:37	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 14:37	1
Cyclohexane	ND		1.0		ug/L			12/08/16 14:37	1
Dichlorodifluoromethane	ND		1.0		ug/L			12/08/16 14:37	1
Ethylbenzene	1.1		1.0		ug/L			12/08/16 14:37	1
1,2-Dibromoethane	ND		1.0		ug/L			12/08/16 14:37	1
Isopropylbenzene	ND		1.0		ug/L			12/08/16 14:37	1
Methyl acetate	ND		2.5		ug/L			12/08/16 14:37	1
Methyl tert-butyl ether	ND		1.0		ug/L			12/08/16 14:37	1
Methylcyclohexane	ND		1.0		ug/L			12/08/16 14:37	1
Methylene Chloride	ND		1.0		ug/L			12/08/16 14:37	1
Styrene	ND		1.0		ug/L			12/08/16 14:37	1
Tetrachloroethene	ND		1.0		ug/L			12/08/16 14:37	1
Toluene	1.9		1.0		ug/L			12/08/16 14:37	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			12/08/16 14:37	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 14:37	1
Trichloroethene	ND		1.0		ug/L			12/08/16 14:37	1
Trichlorofluoromethane	ND		1.0		ug/L			12/08/16 14:37	1
Vinyl chloride	ND		1.0		ug/L			12/08/16 14:37	1
Xylenes, Total	3.2		2.0		ug/L			12/08/16 14:37	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/08/16 14:37	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-009

Lab Sample ID: 480-110656-9

Date Collected: 12/06/16 10:40

Matrix: Water

Date Received: 12/07/16 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 120		12/08/16 14:37	1
1,2-Dichloroethane-d4 (Surr)	104		77 - 120		12/08/16 14:37	1
4-Bromofluorobenzene (Surr)	94		73 - 120		12/08/16 14:37	1
Dibromofluoromethane (Surr)	103		75 - 123		12/08/16 14:37	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
2,4,6-Trichlorophenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
2,4-Dichlorophenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
2,4-Dimethylphenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
2,4-Dinitrophenol	ND		9.7		ug/L		12/09/16 06:12	12/15/16 19:17	1
2,4-Dinitrotoluene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
2,6-Dinitrotoluene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
2-Chloronaphthalene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
2-Chlorophenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
2-Methylnaphthalene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
2-Methylphenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
2-Nitroaniline	ND		9.7		ug/L		12/09/16 06:12	12/15/16 19:17	1
2-Nitrophenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
3,3'-Dichlorobenzidine	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
3-Nitroaniline	ND		9.7		ug/L		12/09/16 06:12	12/15/16 19:17	1
4,6-Dinitro-2-methylphenol	ND		9.7		ug/L		12/09/16 06:12	12/15/16 19:17	1
4-Bromophenyl phenyl ether	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
4-Chloro-3-methylphenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
4-Chloroaniline	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
4-Chlorophenyl phenyl ether	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
4-Methylphenol	ND		9.7		ug/L		12/09/16 06:12	12/15/16 19:17	1
4-Nitroaniline	ND		9.7		ug/L		12/09/16 06:12	12/15/16 19:17	1
4-Nitrophenol	ND		9.7		ug/L		12/09/16 06:12	12/15/16 19:17	1
Acenaphthene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Acenaphthylene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Acetophenone	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Anthracene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Atrazine	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Benzaldehyde	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Benzo[a]anthracene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Benzo[a]pyrene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Benzo[b]fluoranthene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Benzo[g,h,i]perylene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Benzo[k]fluoranthene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Biphenyl	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
bis (2-chloroisopropyl) ether	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Bis(2-chloroethoxy)methane	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Bis(2-chloroethyl)ether	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Bis(2-ethylhexyl) phthalate	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Butyl benzyl phthalate	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Caprolactam	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Carbazole	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Chrysene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Coopperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-009

Lab Sample ID: 480-110656-9

Date Collected: 12/06/16 10:40

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Dibenzofuran	ND		9.7		ug/L		12/09/16 06:12	12/15/16 19:17	1
Diethyl phthalate	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Dimethyl phthalate	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Di-n-butyl phthalate	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Di-n-octyl phthalate	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Fluoranthene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Fluorene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Hexachlorobenzene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Hexachlorobutadiene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Hexachlorocyclopentadiene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Hexachloroethane	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Indeno[1,2,3-cd]pyrene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Isophorone	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Naphthalene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Nitrobenzene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
N-Nitrosodi-n-propylamine	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
N-Nitrosodiphenylamine	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Pentachlorophenol	ND		9.7		ug/L		12/09/16 06:12	12/15/16 19:17	1
Phenanthrene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Phenol	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1
Pyrene	ND		4.9		ug/L		12/09/16 06:12	12/15/16 19:17	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	87	T J	ug/L		2.51		12/09/16 06:12	12/15/16 19:17	1
Toluene	3.7	T J N	ug/L		3.51	108-88-3	12/09/16 06:12	12/15/16 19:17	1
Unknown	76	T J	ug/L		4.34		12/09/16 06:12	12/15/16 19:17	1
Benzene, 1,3-dimethyl-	7.2	T J N	ug/L		4.67	108-38-3	12/09/16 06:12	12/15/16 19:17	1
Cyclotetrasiloxane, octamethyl-	3.1	T J N	ug/L		5.61	556-67-2	12/09/16 06:12	12/15/16 19:17	1
Cyclopentasiloxane, decamethyl-	2.5	T J N	ug/L		6.58	541-02-6	12/09/16 06:12	12/15/16 19:17	1
Cyclohexasiloxane, dodecamethyl-	1.6	T J N	ug/L		7.46	540-97-6	12/09/16 06:12	12/15/16 19:17	1
Unknown	1.8	T J	ug/L		10.69		12/09/16 06:12	12/15/16 19:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	93		52 - 132	12/09/16 06:12	12/15/16 19:17	1
2-Fluorobiphenyl	88		48 - 120	12/09/16 06:12	12/15/16 19:17	1
2-Fluorophenol (Surr)	56		20 - 120	12/09/16 06:12	12/15/16 19:17	1
Nitrobenzene-d5 (Surr)	85		46 - 120	12/09/16 06:12	12/15/16 19:17	1
Phenol-d5 (Surr)	43		16 - 120	12/09/16 06:12	12/15/16 19:17	1
p-Terphenyl-d14 (Surr)	99		67 - 150	12/09/16 06:12	12/15/16 19:17	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.46		ug/L		12/08/16 06:26	12/09/16 08:08	1
PCB-1221	ND		0.46		ug/L		12/08/16 06:26	12/09/16 08:08	1
PCB-1232	ND		0.46		ug/L		12/08/16 06:26	12/09/16 08:08	1
PCB-1242	ND		0.46		ug/L		12/08/16 06:26	12/09/16 08:08	1
PCB-1248	ND		0.46		ug/L		12/08/16 06:26	12/09/16 08:08	1
PCB-1254	ND		0.46		ug/L		12/08/16 06:26	12/09/16 08:08	1
PCB-1260	ND		0.46		ug/L		12/08/16 06:26	12/09/16 08:08	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-009

Lab Sample ID: 480-110656-9

Date Collected: 12/06/16 10:40

Matrix: Water

Date Received: 12/07/16 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	55		19 - 120	12/08/16 06:26	12/09/16 08:08	1
DCB Decachlorobiphenyl	60		19 - 120	12/08/16 06:26	12/09/16 08:08	1
Tetrachloro-m-xylene	62		39 - 121	12/08/16 06:26	12/09/16 08:08	1
Tetrachloro-m-xylene	71		39 - 121	12/08/16 06:26	12/09/16 08:08	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	3.1		0.20		mg/L		12/08/16 11:30	12/09/16 17:18	1
Antimony	ND		0.020		mg/L		12/08/16 11:30	12/09/16 17:18	1
Arsenic	ND		0.015		mg/L		12/08/16 11:30	12/09/16 17:18	1
Barium	0.53		0.0020		mg/L		12/08/16 11:30	12/09/16 17:18	1
Beryllium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 17:18	1
Cadmium	0.0027		0.0020		mg/L		12/08/16 11:30	12/09/16 17:18	1
Calcium	68.9		0.50		mg/L		12/08/16 11:30	12/09/16 17:18	1
Chromium	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 17:18	1
Cobalt	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 17:18	1
Copper	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:18	1
Iron	2.1		0.050		mg/L		12/08/16 11:30	12/09/16 17:18	1
Lead	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:18	1
Magnesium	20.9		0.20		mg/L		12/08/16 11:30	12/09/16 17:18	1
Manganese	0.80		0.0030		mg/L		12/08/16 11:30	12/09/16 17:18	1
Nickel	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:18	1
Potassium	8.6	A	0.50		mg/L		12/08/16 11:30	12/09/16 17:18	1
Selenium	ND		0.025		mg/L		12/08/16 11:30	12/09/16 17:18	1
Silver	ND		0.0060		mg/L		12/08/16 11:30	12/09/16 17:18	1
Sodium	144	A	1.0		mg/L		12/08/16 11:30	12/09/16 17:18	1
Thallium	ND		0.020		mg/L		12/08/16 11:30	12/09/16 17:18	1
Vanadium	ND		0.0050		mg/L		12/08/16 11:30	12/09/16 17:18	1
Zinc	0.063		0.010		mg/L		12/08/16 11:30	12/09/16 17:18	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		12/09/16 08:25	12/09/16 14:07	1

Client Sample ID: WG-080987-120616-BP-010

Lab Sample ID: 480-110656-10

Date Collected: 12/06/16 12:20

Matrix: Water

Date Received: 12/07/16 09:30

MW-13 S

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			12/08/16 15:01	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			12/08/16 15:01	1
1,1,2-Trichloroethane	ND		1.0		ug/L			12/08/16 15:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			12/08/16 15:01	1
1,1-Dichloroethane	ND		1.0		ug/L			12/08/16 15:01	1
1,1-Dichloroethene	ND		1.0		ug/L			12/08/16 15:01	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			12/08/16 15:01	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			12/08/16 15:01	1
1,2-Dichlorobenzene	ND		1.0		ug/L			12/08/16 15:01	1
1,2-Dichloroethane	ND		1.0		ug/L			12/08/16 15:01	1
1,2-Dichloropropane	ND		1.0		ug/L			12/08/16 15:01	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperaage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-010

Lab Sample ID: 480-110656-10

Date Collected: 12/06/16 12:20

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0		ug/L			12/08/16 15:01	1
1,4-Dichlorobenzene	ND		1.0		ug/L			12/08/16 15:01	1
2-Butanone (MEK)	ND		10		ug/L			12/08/16 15:01	1
2-Hexanone	ND		5.0		ug/L			12/08/16 15:01	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			12/08/16 15:01	1
Acetone	ND		10		ug/L			12/08/16 15:01	1
Benzene	ND		1.0		ug/L			12/08/16 15:01	1
Bromodichloromethane	ND		1.0		ug/L			12/08/16 15:01	1
Bromoform	ND		1.0		ug/L			12/08/16 15:01	1
Bromomethane	ND		1.0		ug/L			12/08/16 15:01	1
Carbon disulfide	ND		1.0		ug/L			12/08/16 15:01	1
Carbon tetrachloride	ND		1.0		ug/L			12/08/16 15:01	1
Chlorobenzene	ND		1.0		ug/L			12/08/16 15:01	1
Dibromochloromethane	ND		1.0		ug/L			12/08/16 15:01	1
Chloroethane	ND		1.0		ug/L			12/08/16 15:01	1
Chloroform	ND		1.0		ug/L			12/08/16 15:01	1
Chloromethane	ND		1.0		ug/L			12/08/16 15:01	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			12/08/16 15:01	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 15:01	1
Cyclohexane	ND		1.0		ug/L			12/08/16 15:01	1
Dichlorodifluoromethane	ND		1.0		ug/L			12/08/16 15:01	1
Ethylbenzene	ND		1.0		ug/L			12/08/16 15:01	1
1,2-Dibromoethane	ND		1.0		ug/L			12/08/16 15:01	1
Isopropylbenzene	ND		1.0		ug/L			12/08/16 15:01	1
Methyl acetate	ND		2.5		ug/L			12/08/16 15:01	1
Methyl tert-butyl ether	ND		1.0		ug/L			12/08/16 15:01	1
Methylcyclohexane	ND		1.0		ug/L			12/08/16 15:01	1
Methylene Chloride	ND		1.0		ug/L			12/08/16 15:01	1
Styrene	ND		1.0		ug/L			12/08/16 15:01	1
Tetrachloroethene	ND		1.0		ug/L			12/08/16 15:01	1
Toluene	ND		1.0		ug/L			12/08/16 15:01	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			12/08/16 15:01	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 15:01	1
Trichloroethene	ND		1.0		ug/L			12/08/16 15:01	1
Trichlorofluoromethane	ND		1.0		ug/L			12/08/16 15:01	1
Vinyl chloride	ND		1.0		ug/L			12/08/16 15:01	1
Xylenes, Total	ND		2.0		ug/L			12/08/16 15:01	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	12	TJ	ug/L		4.55			12/08/16 15:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120		12/08/16 15:01	1
1,2-Dichloroethane-d4 (Surr)	104		77 - 120		12/08/16 15:01	1
4-Bromofluorobenzene (Surr)	92		73 - 120		12/08/16 15:01	1
Dibromofluoromethane (Surr)	106		75 - 123		12/08/16 15:01	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-010

Lab Sample ID: 480-110656-10

Date Collected: 12/06/16 12:20

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
2,4-Dichlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
2,4-Dimethylphenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
2,4-Dinitrophenol	ND		9.3		ug/L		12/09/16 06:12	12/15/16 04:47	1
2,4-Dinitrotoluene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
2,6-Dinitrotoluene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
2-Chloronaphthalene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
2-Chlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
2-Methylnaphthalene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
2-Methylphenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
2-Nitroaniline	ND		9.3		ug/L		12/09/16 06:12	12/15/16 04:47	1
2-Nitrophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
3,3'-Dichlorobenzidine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
3-Nitroaniline	ND		9.3		ug/L		12/09/16 06:12	12/15/16 04:47	1
4,6-Dinitro-2-methylphenol	ND		9.3		ug/L		12/09/16 06:12	12/15/16 04:47	1
4-Bromophenyl phenyl ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
4-Chloro-3-methylphenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
4-Chloroaniline	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
4-Chlorophenyl phenyl ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
4-Methylphenol	ND		9.3		ug/L		12/09/16 06:12	12/15/16 04:47	1
4-Nitroaniline	ND		9.3		ug/L		12/09/16 06:12	12/15/16 04:47	1
4-Nitrophenol	ND		9.3		ug/L		12/09/16 06:12	12/15/16 04:47	1
Acenaphthene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Acenaphthylene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Acetophenone	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Anthracene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Atrazine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Benzaldehyde	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Benzo[a]anthracene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Benzo[a]pyrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Benzo[b]fluoranthene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Benzo[g,h,i]perylene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Benzo[k]fluoranthene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Biphenyl	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
bis (2-chloroisopropyl) ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Bis(2-chloroethoxy)methane	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Bis(2-chloroethyl)ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Bis(2-ethylhexyl) phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Butyl benzyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Caprolactam	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Carbazole	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Chrysene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Dibenz(a,h)anthracene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Dibenzofuran	ND		9.3		ug/L		12/09/16 06:12	12/15/16 04:47	1
Diethyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Dimethyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Di-n-butyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Di-n-octyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Fluoranthene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-010

Lab Sample ID: 480-110656-10

Date Collected: 12/06/16 12:20

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Hexachlorobenzene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Hexachlorobutadiene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Hexachlorocyclopentadiene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Hexachloroethane	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Indeno[1,2,3-cd]pyrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Isophorone	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Naphthalene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Nitrobenzene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
N-Nitrosodi-n-propylamine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
N-Nitrosodiphenylamine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Pentachlorophenol	ND		9.3		ug/L		12/09/16 06:12	12/15/16 04:47	1
Phenanthrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Phenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1
Pyrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 04:47	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	83	T J	ug/L		2.52		12/09/16 06:12	12/15/16 04:47	1
1,4-Dioxane	2.3	T J N	ug/L		2.78	123-91-1	12/09/16 06:12	12/15/16 04:47	1
Toluene	2.1	T J N	ug/L		3.52	108-88-3	12/09/16 06:12	12/15/16 04:47	1
Unknown	60	T J	ug/L		4.35		12/09/16 06:12	12/15/16 04:47	1
Unknown	14	T J	ug/L		4.67		12/09/16 06:12	12/15/16 04:47	1
Unknown	3.4	T J	ug/L		6.43		12/09/16 06:12	12/15/16 04:47	1
Unknown	2.0	T J	ug/L		7.02		12/09/16 06:12	12/15/16 04:47	1
Unknown	3.1	T J	ug/L		7.57		12/09/16 06:12	12/15/16 04:47	1
Unknown	3.8	T J	ug/L		7.63		12/09/16 06:12	12/15/16 04:47	1
Unknown	3.6	T J	ug/L		9.13		12/09/16 06:12	12/15/16 04:47	1
Dodecanamide	2.3	T J N	ug/L		10.55	1120-16-7	12/09/16 06:12	12/15/16 04:47	1
Octadecanoic acid	5.9	T J N	ug/L		10.74	57-11-4	12/09/16 06:12	12/15/16 04:47	1
Unknown	2.0	T J	ug/L		11.48		12/09/16 06:12	12/15/16 04:47	1
Unknown	2.2	T J	ug/L		12.52		12/09/16 06:12	12/15/16 04:47	1
9-Octadecenamide, (Z)-	5.4	T J N	ug/L		12.88	301-02-0	12/09/16 06:12	12/15/16 04:47	1
Unknown	2.7	T J	ug/L		14.05		12/09/16 06:12	12/15/16 04:47	1
Unknown	2.0	T J	ug/L		15.58		12/09/16 06:12	12/15/16 04:47	1
Unknown	2.7	T J	ug/L		16.64		12/09/16 06:12	12/15/16 04:47	1
Unknown	3.8	T J	ug/L		16.70		12/09/16 06:12	12/15/16 04:47	1
Unknown	5.0	T J	ug/L		18.07		12/09/16 06:12	12/15/16 04:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	108		52 - 132	12/09/16 06:12	12/15/16 04:47	1
2-Fluorobiphenyl	93		48 - 120	12/09/16 06:12	12/15/16 04:47	1
2-Fluorophenol (Surr)	70		20 - 120	12/09/16 06:12	12/15/16 04:47	1
Nitrobenzene-d5 (Surr)	90		46 - 120	12/09/16 06:12	12/15/16 04:47	1
Phenol-d5 (Surr)	54		16 - 120	12/09/16 06:12	12/15/16 04:47	1
p-Terphenyl-d14 (Surr)	96		67 - 150	12/09/16 06:12	12/15/16 04:47	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.47		ug/L		12/08/16 06:26	12/09/16 08:23	1
PCB-1221	ND		0.47		ug/L		12/08/16 06:26	12/09/16 08:23	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-010

Lab Sample ID: 480-110656-10

Date Collected: 12/06/16 12:20

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1232	ND		0.47		ug/L		12/08/16 06:26	12/09/16 08:23	1
PCB-1242	ND		0.47		ug/L		12/08/16 06:26	12/09/16 08:23	1
PCB-1248	ND		0.47		ug/L		12/08/16 06:26	12/09/16 08:23	1
PCB-1254	ND		0.47		ug/L		12/08/16 06:26	12/09/16 08:23	1
PCB-1260	ND		0.47		ug/L		12/08/16 06:26	12/09/16 08:23	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	55		19 - 120				12/08/16 06:26	12/09/16 08:23	1
DCB Decachlorobiphenyl	61		19 - 120				12/08/16 06:26	12/09/16 08:23	1
Tetrachloro-m-xylene	63		39 - 121				12/08/16 06:26	12/09/16 08:23	1
Tetrachloro-m-xylene	69		39 - 121				12/08/16 06:26	12/09/16 08:23	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.23		0.20		mg/L		12/08/16 11:30	12/09/16 17:21	1
Antimony	ND		0.020		mg/L		12/08/16 11:30	12/09/16 17:21	1
Arsenic	ND		0.015		mg/L		12/08/16 11:30	12/09/16 17:21	1
Barium	0.16		0.0020		mg/L		12/08/16 11:30	12/09/16 17:21	1
Beryllium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 17:21	1
Cadmium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 17:21	1
Calcium	51.8		0.50		mg/L		12/08/16 11:30	12/09/16 17:21	1
Chromium	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 17:21	1
Cobalt	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 17:21	1
Copper	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:21	1
Iron	2.3		0.050		mg/L		12/08/16 11:30	12/09/16 17:21	1
Lead	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:21	1
Magnesium	19.2		0.20		mg/L		12/08/16 11:30	12/09/16 17:21	1
Manganese	5.9		0.0030		mg/L		12/08/16 11:30	12/09/16 17:21	1
Nickel	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:21	1
Potassium	3.6		0.50		mg/L		12/08/16 11:30	12/12/16 13:47	1
Selenium	ND		0.025		mg/L		12/08/16 11:30	12/09/16 17:21	1
Silver	ND		0.0060		mg/L		12/08/16 11:30	12/09/16 17:21	1
Sodium	83.1		1.0		mg/L		12/08/16 11:30	12/12/16 13:47	1
Thallium	ND		0.020		mg/L		12/08/16 11:30	12/09/16 17:21	1
Vanadium	ND		0.0050		mg/L		12/08/16 11:30	12/09/16 17:21	1
Zinc	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:21	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		12/09/16 08:25	12/09/16 14:09	1

Client Sample ID: WG-080987-120616-BP-011

Lab Sample ID: 480-110656-11

Date Collected: 12/06/16 13:25

Matrix: Water

Date Received: 12/07/16 09:30

MW-12 S

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		ug/L			12/08/16 15:24	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			12/08/16 15:24	1
1,1,2-Trichloroethane	ND		1.0		ug/L			12/08/16 15:24	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-011

Lab Sample ID: 480-110656-11

Date Collected: 12/06/16 13:25

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			12/08/16 15:24	1
1,1-Dichloroethane	ND		1.0		ug/L			12/08/16 15:24	1
1,1-Dichloroethene	ND		1.0		ug/L			12/08/16 15:24	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			12/08/16 15:24	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			12/08/16 15:24	1
1,2-Dichlorobenzene	ND		1.0		ug/L			12/08/16 15:24	1
1,2-Dichloroethane	ND		1.0		ug/L			12/08/16 15:24	1
1,2-Dichloropropane	ND		1.0		ug/L			12/08/16 15:24	1
1,3-Dichlorobenzene	ND		1.0		ug/L			12/08/16 15:24	1
1,4-Dichlorobenzene	ND		1.0		ug/L			12/08/16 15:24	1
2-Butanone (MEK)	ND		10		ug/L			12/08/16 15:24	1
2-Hexanone	ND		5.0		ug/L			12/08/16 15:24	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			12/08/16 15:24	1
Acetone	ND		10		ug/L			12/08/16 15:24	1
Benzene	ND		1.0		ug/L			12/08/16 15:24	1
Bromodichloromethane	ND		1.0		ug/L			12/08/16 15:24	1
Bromoform	ND		1.0		ug/L			12/08/16 15:24	1
Bromomethane	ND		1.0		ug/L			12/08/16 15:24	1
Carbon disulfide	ND		1.0		ug/L			12/08/16 15:24	1
Carbon tetrachloride	ND		1.0		ug/L			12/08/16 15:24	1
Chlorobenzene	ND		1.0		ug/L			12/08/16 15:24	1
Dibromochloromethane	ND		1.0		ug/L			12/08/16 15:24	1
Chloroethane	ND		1.0		ug/L			12/08/16 15:24	1
Chloroform	ND		1.0		ug/L			12/08/16 15:24	1
Chloromethane	ND		1.0		ug/L			12/08/16 15:24	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			12/08/16 15:24	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 15:24	1
Cyclohexane	ND		1.0		ug/L			12/08/16 15:24	1
Dichlorodifluoromethane	ND		1.0		ug/L			12/08/16 15:24	1
Ethylbenzene	ND		1.0		ug/L			12/08/16 15:24	1
1,2-Dibromoethane	ND		1.0		ug/L			12/08/16 15:24	1
Isopropylbenzene	ND		1.0		ug/L			12/08/16 15:24	1
Methyl acetate	ND		2.5		ug/L			12/08/16 15:24	1
Methyl tert-butyl ether	ND		1.0		ug/L			12/08/16 15:24	1
Methylcyclohexane	ND		1.0		ug/L			12/08/16 15:24	1
Methylene Chloride	ND		1.0		ug/L			12/08/16 15:24	1
Styrene	ND		1.0		ug/L			12/08/16 15:24	1
Tetrachloroethene	ND		1.0		ug/L			12/08/16 15:24	1
Toluene	ND		1.0		ug/L			12/08/16 15:24	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			12/08/16 15:24	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			12/08/16 15:24	1
Trichloroethene	ND		1.0		ug/L			12/08/16 15:24	1
Trichlorofluoromethane	ND		1.0		ug/L			12/08/16 15:24	1
Vinyl chloride	ND		1.0		ug/L			12/08/16 15:24	1
Xylenes, Total	ND		2.0		ug/L			12/08/16 15:24	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Silanol, trimethyl-	12	T J N	ug/L		4.55	1066-40-6		12/08/16 15:24	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-011

Lab Sample ID: 480-110656-11

Date Collected: 12/06/16 13:25

Matrix: Water

Date Received: 12/07/16 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 120		12/08/16 15:24	1
1,2-Dichloroethane-d4 (Surr)	107		77 - 120		12/08/16 15:24	1
4-Bromofluorobenzene (Surr)	93		73 - 120		12/08/16 15:24	1
Dibromofluoromethane (Surr)	107		75 - 123		12/08/16 15:24	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
2,4,6-Trichlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
2,4-Dichlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
2,4-Dimethylphenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
2,4-Dinitrophenol	ND		9.3		ug/L		12/09/16 06:12	12/15/16 05:15	1
2,4-Dinitrotoluene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
2,6-Dinitrotoluene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
2-Chloronaphthalene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
2-Chlorophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
2-Methylnaphthalene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
2-Methylphenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
2-Nitroaniline	ND		9.3		ug/L		12/09/16 06:12	12/15/16 05:15	1
2-Nitrophenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
3,3'-Dichlorobenzidine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
3-Nitroaniline	ND		9.3		ug/L		12/09/16 06:12	12/15/16 05:15	1
4,6-Dinitro-2-methylphenol	ND		9.3		ug/L		12/09/16 06:12	12/15/16 05:15	1
4-Bromophenyl phenyl ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
4-Chloro-3-methylphenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
4-Chloroaniline	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
4-Chlorophenyl phenyl ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
4-Methylphenol	ND		9.3		ug/L		12/09/16 06:12	12/15/16 05:15	1
4-Nitroaniline	ND		9.3		ug/L		12/09/16 06:12	12/15/16 05:15	1
4-Nitrophenol	ND		9.3		ug/L		12/09/16 06:12	12/15/16 05:15	1
Acenaphthenè	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Acenaphthylene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Acetophenone	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Anthracene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Atrazine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Benzaldehyde	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Benzo[a]anthracene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Benzo[a]pyrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Benzo[b]fluoranthene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Benzo[g,h,i]perylene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Benzo[k]fluoranthene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Biphenyl	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
bis (2-chloroisopropyl) ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Bis(2-chloroethoxy)methane	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Bis(2-chloroethyl)ether	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Bis(2-ethylhexyl) phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Butyl benzyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Caprolactam	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Carbazole	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Chrysene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-011

Lab Sample ID: 480-110656-11

Date Collected: 12/06/16 13:25

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Dibenzofuran	ND		9.3		ug/L		12/09/16 06:12	12/15/16 05:15	1
Diethyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Dimethyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Di-n-butyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Di-n-octyl phthalate	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Fluoranthene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Fluorene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Hexachlorobenzene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Hexachlorobutadiene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Hexachlorocyclopentadiene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Hexachloroethane	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Indeno[1,2,3-cd]pyrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Isophorone	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Naphthalene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Nitrobenzene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
N-Nitrosodi-n-propylamine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
N-Nitrosodiphenylamine	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Pentachlorophenol	ND		9.3		ug/L		12/09/16 06:12	12/15/16 05:15	1
Phenanthrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Phenol	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1
Pyrene	ND		4.7		ug/L		12/09/16 06:12	12/15/16 05:15	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	86	T J	ug/L		2.52		12/09/16 06:12	12/15/16 05:15	1
Unknown	2.2	T J	ug/L		2.56		12/09/16 06:12	12/15/16 05:15	1
Toluene	2.3	T J N	ug/L		3.51	108-88-3	12/09/16 06:12	12/15/16 05:15	1
Unknown	60	T J	ug/L		4.35		12/09/16 06:12	12/15/16 05:15	1
Cyclotetrasiloxane, octamethyl-	4.5	T J N	ug/L		5.61	556-67-2	12/09/16 06:12	12/15/16 05:15	1
Cyclopentasiloxane, decamethyl-	5.0	T J N	ug/L		6.58	541-02-6	12/09/16 06:12	12/15/16 05:15	1
Cyclohexasiloxane, dodecamethyl-	5.5	T J N	ug/L		7.46	540-97-6	12/09/16 06:12	12/15/16 05:15	1
Unknown	2.1	T J	ug/L		8.22		12/09/16 06:12	12/15/16 05:15	1
Unknown	3.0	T J	ug/L		8.82		12/09/16 06:12	12/15/16 05:15	1
Unknown	1.8	T J	ug/L		9.13		12/09/16 06:12	12/15/16 05:15	1
Naphthalene, 1,2,3,4-tetrahydro-2,5,8-trimethyl-	4.1	T J N	ug/L		9.19	30316-17-7	12/09/16 06:12	12/15/16 05:15	1
Unknown	5.2	T J	ug/L		9.27		12/09/16 06:12	12/15/16 05:15	1
Unknown	1.5	T J	ug/L		9.36		12/09/16 06:12	12/15/16 05:15	1
Unknown	1.5	T J	ug/L		9.44		12/09/16 06:12	12/15/16 05:15	1
Octadecanoic acid	1.9	T J N	ug/L		10.74	57-11-4	12/09/16 06:12	12/15/16 05:15	1
Unknown	1.6	T J	ug/L		11.16		12/09/16 06:12	12/15/16 05:15	1
Unknown	8.4	T J	ug/L		11.49		12/09/16 06:12	12/15/16 05:15	1
Unknown	2.8	T J	ug/L		13.75		12/09/16 06:12	12/15/16 05:15	1
Unknown	13	T J	ug/L		14.05		12/09/16 06:12	12/15/16 05:15	1
Unknown	2.3	T J	ug/L		16.97		12/09/16 06:12	12/15/16 05:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	104		52 - 132	12/09/16 06:12	12/15/16 05:15	1
2-Fluorobiphenyl	90		48 - 120	12/09/16 06:12	12/15/16 05:15	1
2-Fluorophenol (Surr)	66		20 - 120	12/09/16 06:12	12/15/16 05:15	1

TestAmerica Buffalo

Client Sample Results

Client: GHD Services Inc.
Project/Site: 080987/10, Friedrichsohn Cooperage Site

TestAmerica Job ID: 480-110656-1

Client Sample ID: WG-080987-120616-BP-011

Lab Sample ID: 480-110656-11

Date Collected: 12/06/16 13:25

Matrix: Water

Date Received: 12/07/16 09:30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	87		46 - 120	12/09/16 06:12	12/15/16 05:15	1
Phenol-d5 (Surr)	51		16 - 120	12/09/16 06:12	12/15/16 05:15	1
p-Terphenyl-d14 (Surr)	98		67 - 150	12/09/16 06:12	12/15/16 05:15	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.47		ug/L		12/08/16 06:26	12/09/16 08:38	1
PCB-1221	ND		0.47		ug/L		12/08/16 06:26	12/09/16 08:38	1
PCB-1232	ND		0.47		ug/L		12/08/16 06:26	12/09/16 08:38	1
PCB-1242	ND		0.47		ug/L		12/08/16 06:26	12/09/16 08:38	1
PCB-1248	ND		0.47		ug/L		12/08/16 06:26	12/09/16 08:38	1
PCB-1254	ND		0.47		ug/L		12/08/16 06:26	12/09/16 08:38	1
PCB-1260	ND		0.47		ug/L		12/08/16 06:26	12/09/16 08:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	64		19 - 120	12/08/16 06:26	12/09/16 08:38	1
DCB Decachlorobiphenyl	70		19 - 120	12/08/16 06:26	12/09/16 08:38	1
Tetrachloro-m-xylene	74		39 - 121	12/08/16 06:26	12/09/16 08:38	1
Tetrachloro-m-xylene	77		39 - 121	12/08/16 06:26	12/09/16 08:38	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.26		0.20		mg/L		12/08/16 11:30	12/09/16 17:25	1
Antimony	ND		0.020		mg/L		12/08/16 11:30	12/09/16 17:25	1
Arsenic	ND		0.015		mg/L		12/08/16 11:30	12/09/16 17:25	1
Barium	0.16		0.0020		mg/L		12/08/16 11:30	12/09/16 17:25	1
Beryllium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 17:25	1
Cadmium	ND		0.0020		mg/L		12/08/16 11:30	12/09/16 17:25	1
Calcium	44.1		0.50		mg/L		12/08/16 11:30	12/09/16 17:25	1
Chromium	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 17:25	1
Cobalt	ND		0.0040		mg/L		12/08/16 11:30	12/09/16 17:25	1
Copper	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:25	1
Iron	2.3		0.050		mg/L		12/08/16 11:30	12/09/16 17:25	1
Lead	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:25	1
Magnesium	12.2		0.20		mg/L		12/08/16 11:30	12/09/16 17:25	1
Manganese	0.65		0.0030		mg/L		12/08/16 11:30	12/09/16 17:25	1
Nickel	ND		0.010		mg/L		12/08/16 11:30	12/09/16 17:25	1
Potassium	3.5		0.50		mg/L		12/08/16 11:30	12/12/16 13:50	1
Selenium	ND		0.025		mg/L		12/08/16 11:30	12/09/16 17:25	1
Silver	ND		0.0060		mg/L		12/08/16 11:30	12/09/16 17:25	1
Sodium	76.1		1.0		mg/L		12/08/16 11:30	12/12/16 13:50	1
Thallium	ND		0.020		mg/L		12/08/16 11:30	12/09/16 17:25	1
Vanadium	ND		0.0050		mg/L		12/08/16 11:30	12/09/16 17:25	1
Zinc	0.015		0.010		mg/L		12/08/16 11:30	12/09/16 17:25	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		12/09/16 08:25	12/09/16 14:11	1

TestAmerica Buffalo

Attachment C



Memorandum

January 31, 2017

Revision: February 8, 2017

To: Jamie Puskas

Ref. No.: 080987-10

From: Kathy Shaw/mkd/6-NF

Tel: 860 747-1800

**Subject: Data Quality Assessment & Innovative Validation
Semiannual Groundwater Monitoring
Friedrichsohn Cooperage/General Electric Company & SI Group
Waterford, New York
December 2016**

1. Introduction

This document details a reduced validation of analytical results for the groundwater samples collected in support of the Semiannual Groundwater Monitoring at the Friedrichsohn Cooperage site during December 2016. The samples were submitted to TestAmerica Laboratories, Inc., located in Amherst, New York. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Full Contract Laboratory Program (CLP) equivalent raw data deliverables were provided by the laboratory. Evaluation of the data was based on information obtained from the finished data sheets, raw data, chain of custody forms, calibration data, blank data, duplicate data, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spike (MS) samples. The assessment of analytical and in-house data included checks for: data consistency by observing comparability of duplicate analyses, adherence to accuracy and precision criteria, and transmittal errors.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

- i) QAPP - Friedrichsohn Cooperage Waterford, New York July 2014
- ii) "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", USEPA 540-R-08-01, June 2008
- iii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review", USEPA 540-R-10-011, January 2010

These Items will subsequently be referred to as the "Guidelines" in this Memorandum.



2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

3. Gas Chromatography/Mass Spectrometer (GC/MS) – Tuning and Mass Calibration (Instrument Performance Check)

3.1 Organic Analyses

Prior to volatile organic compound (VOC) and semi-volatile organic compound (SVOC) analysis, GC/MS instrumentation is tuned to ensure optimization over the mass range of interest. To evaluate instrument tuning, methods require the analysis of specific tuning compounds bromofluorobenzene (BFB) and decafluorotriphenylphosphine (DFTPP), respectively. The resulting spectra must meet the criteria cited in the methods before analysis is initiated. Analysis of the tuning compound must then be repeated every 12 hours throughout sample analysis to ensure the continued optimization of the instrument.

Tuning compounds were analyzed at the required frequency throughout VOC and SVOC analysis periods. All tuning criteria were met indicating that proper optimization of the instrumentation was achieved.

4. Initial Calibration - Organic Analyses

4.1 GC/MS

To quantify VOCs and SVOCs of interest in samples, calibration of the GC/MS over a specific concentration range must be performed. Initially, a five-point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific concentration range. Linearity of the calibration curve and instrument sensitivity are evaluated against the following criteria:

- i) All relative response factors (RRFs) must be greater than or equal to 0.050 (greater than or equal to 0.010 for compounds that exhibit poor response)
- ii) The percent relative standard deviation (%RSD) values must not exceed 20.0 percent (40.0 percent for compounds that exhibit poor response) or a minimum correlation coefficient (R) and minimum coefficient of determination (R^2) of 0.99 if linear and quadratic equation calibration curves are used

The initial calibration data for VOCs and SVOCs were reviewed. All compounds met the above criteria for sensitivity and linearity.



4.2 GC

In order to quantify organic compounds of interest by GC, calibration of the gas chromatograph over a specific concentration range must be performed. Initially, a calibration curve consisting of a minimum of five concentration levels is analyzed for all single component compounds of interest and for polychlorinated biphenyls (PCB) (Aroclors 1016 and 1260). A single calibration standard is analyzed for all other multi-response compounds. Linearity of the calibration curve is acceptable if all RSD values are less than or equal to 20.0 percent or if the correlation coefficient (R) is 0.99 or greater for linear regression curves.

Retention time windows are also calculated from the initial calibration analyses. These windows are then used to identify all compounds of interest in subsequent analyses.

All initial calibration standards were analyzed at the required frequencies. All retention time, peak resolution, and linearity criteria were satisfied as specified in the methods.

5. Initial Calibration – Inorganic Analyses

Initial calibration of the instruments ensures that they are capable of producing satisfactory quantitative data at the beginning of a series of analyses. For ICP analysis, a calibration blank and at least one standard must be analyzed at each wavelength to establish the analytical curve. For mercury atomic absorption (AA) analyses, a calibration blank and a minimum of five standards must be analyzed to establish the analytical curve, and resulting correlation coefficients (R) must be 0.995 or greater.

After the analyses of the calibration curves, an initial calibration verification (ICV) standard must be analyzed to verify the analytical accuracy of the calibration curves. All analyte recoveries from the analyses of the ICVs must be within the following control limits:

Analytical Method	Parameter	Control Limits
ICP	Metals	90 - 110%
Cold Vapor AA	Mercury	80 - 120%

Upon review of the data, it was determined that the calibration curves and ICVs were analyzed at the proper frequencies and that all of the above-specified criteria were met. The laboratory effectively demonstrated that the instrumentation used for metals and general chemistry analyses were properly calibrated prior to sample analysis.

6. Continuing Calibration - Organic Analyses

6.1 GC/MS

To ensure that instrument calibration for VOC and SVOC analyses is acceptable throughout the sample analysis period, continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours.



The following criteria were employed to evaluate continuing calibration data:

- i) All RRF values must be greater than or equal to 0.050 (greater than or equal to 0.010 for compounds that exhibit poor response)
- ii) Percent difference (%D) values must not exceed 25.0 percent (40.0 percent for compounds that exhibit poor response)

Calibration standards were analyzed at the required frequency, and the results met the above criteria for instrument sensitivity. Some continuing calibration VOC and SVOC standard results indicated variability in the instrument response for various compounds yielding a high %D. Associated results affected by the change in instrument response are qualified in Table 4.

6.2 GC

To ensure that the calibration of the instrument for organic analyses by GC is valid throughout the sample analysis period, continuing calibration standards are analyzed and evaluated on a regular basis. To evaluate the continued linearity of the calibration, %D values are calculated for each compound. As specified in the methods, all %D values should not exceed 15 percent. To ensure that compound retention times do not vary over the analysis period, all retention times for continuing calibration compounds must fall within the established retention time windows.

All continuing calibration standards were analyzed at the required frequency. All %D values and compound retention times met the above criteria indicating acceptable instrument calibration throughout the analysis period.

7. Continuing Calibration - Inorganic Analyses

To ensure that instrument calibration is acceptable throughout the sample analysis period, continuing calibration verification (CCV) standards are analyzed on a regular basis. Each CCV is deemed acceptable if all analyte recoveries are within the control limits specified above for the ICVs. If some of the CCV analyte recoveries are outside the control limits, samples analyzed before and after the CCV, up until the previous and proceeding CCV analyses, are affected.

For this study, CCVs were analyzed at the proper frequency. The potassium standard result indicated variability in the instrument response for that analyte yielding a high %D. Associated results affected by the change in instrument response are qualified in Table 4.

8. Contract Required Detection Limit (CRDL) Standard Analyses

To verify the linearity of the ICP calibration near the detection limit, a standard is analyzed which contains the ICP analytes at specified concentrations. This standard must be analyzed at the beginning and end of each sample analysis run or a minimum of twice per 8-hour period.

CRDL recoveries were evaluated using the criteria specified in the October 2004 "Guidelines". The CRDL recoveries were acceptable.



9. Laboratory Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures. Additionally, initial and continuing calibration blanks (ICBs/CCBs) are routinely analyzed after each ICV/CCV for the inorganic parameters.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

9.1 Organic Analyses

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

9.2 Inorganic Analyses

Upon review of the ICBs, CCBs, and method blanks, it was noted that a potassium concentration was observed above the method detection limit (MDL). Most investigative samples associated with the low level detections reported either non-detect concentrations or concentrations significantly greater than the associated laboratory blank concentrations for the analytes of interest. These sample results were not impacted by the low level contamination detected.

10. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for VOC, SVOC and PCB determinations were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Each individual surrogate compound is expected to meet the laboratory control limits with the exception of SVOC analyses. According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria with the exception of one low PCB surrogate recovery. The associated sample result affected by the potential low bias is qualified as estimated in Table 5.

11. Internal Standards (IS) Analyses

IS data were evaluated for all VOC and SVOC sample analyses.



11.1 Organics Analyses

To ensure that changes in the GC/MS sensitivity and response do not affect sample analysis results, IS compounds are added to each sample prior to analysis. All results are then calculated as a ratio of the IS responses.

The sample IS results were evaluated against the following criteria:

- i) The retention time of the IS must not vary more than ± 30 seconds from the associated calibration standard.
- ii) IS area counts must not vary by more than a factor of two (-50 percent to +100 percent) from the associated calibration standard.

All organic IS recoveries and retention times met the above criteria.

12. Laboratory Control Sample Analyses

LCS and/or laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, the LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

12.1 Organic Analyses

The LCS/LCSD contained all compounds of interest. All LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy.

12.2 Inorganic Analyses

The LCS contained all analytes of interest. LCS recoveries were assessed per the "Guidelines". All LCS recoveries were within the control limits, demonstrating acceptable analytical accuracy.

13. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the distillation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed.

MS/MSD analysis was performed as specified in Table 1.



13.1 Organic Analyses

The MS/MSD samples were spiked with all compounds of interest. Most of the percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

MS and MSD percent recovery values were outside of control limits for PCB-1260. The sample associated with outlying recovery was qualified in Table 6 as follows:

- i) Non-detect results associated with the low MS/MSD recovery are qualified as estimated

13.2 Inorganic Analyses

The MS/MSD samples were spiked with the analytes of interest, and the results were evaluated using the "Guidelines". All percent recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision.

14. ICP Serial Dilution

The serial dilution determines whether significant physical or chemical interferences exist due to sample matrix. A minimum of 1 per 20 investigative samples or at least 1 per analytical batch must be analyzed at a five-fold dilution. For samples with sufficient analyte concentrations (>50 times the method detection limit), the serial dilution results must agree within 10 percent of the original results.

All results met the criteria above.

15. ICP Interference Check Sample Analysis (ICS)

To verify that the laboratory has established proper inter-element and background correction factors, ICSs are analyzed. These samples contain high concentrations of aluminum, calcium, magnesium, and iron and are analyzed at the beginning and end of each sample analysis period. The ICSs are evaluated against recovery control limits of 80 to 120 percent.

ICS analysis results were evaluated for all samples using the criteria in the "Guidelines". All ICS recoveries and results were acceptable.

16. Field QA/QC Samples

The field QA/QC consisted of one trip blank sample, one rinse blank sample, and one field duplicate sample set.

16.1 Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, two trip blanks were submitted to the laboratory for VOC analysis. All results were non-detect for the compounds of interest.



16.2 Rinse Blank Sample Analysis

To assess field decontamination procedures, ambient conditions at the site, and cleanliness of sample containers, one rinse blank was submitted for analysis, as identified in Table 1. All results were non-detect for the analytes of interest.

16.3 Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, 1 field duplicate sample was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 35 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is one time the RL value for water samples.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

17. Tentatively Identified Compounds (TICS)

Chromatographic peaks recorded during VOC and SVOC sample GC/MS analyses that are not target compounds, surrogates, or IS, are potential TICS.

A summary of the TICS reported by the laboratory is presented in Table 2. Per the "Guidelines", TICS that were present in the method blanks or identified as solvent preservatives/aldol reaction products were rejected and are not included in the Table 2.

18. Analyte Reporting

The laboratory reported detected results down to the laboratory's MDL for each analyte. Positive analyte detections less than the PQL but greater than the MDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

19. Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and mass spectra were evaluated according to the identification criteria established by the methods. The samples identified in Table 1 were reviewed. The organic compounds reported adhered to the specified identification criteria.



20. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications noted herein.

Table 1

Sample Collection and Analysis Summary
Semiannual Groundwater Monitoring
Friedrichsohn Cooperage/General Electric Company & SI Group
Waterford, New York
December 2016

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters				Comments
					TAL Metals	PCB	TCL VOC-TICs	TCL SVOC-TICs	
WG-080987-120516-BP-001	MW-8	Water	12/05/2016	10:40	X	X	X	X	
WG-080987-120516-BP-002	MW-10	Water	12/05/2016	11:45	X	X	X	X	
WG-080987-120516-BP-004	MW-6S	Water	12/05/2016	13:30	X	X	X	X	MS/MSD
WG-080987-120516-BP-003	MW-6	Water	12/05/2016	14:30	X	X	X	X	
WG-080987-120516-BP-005	MW-5	Water	12/05/2016	15:40	X	X	X	X	
WG-080987-120516-BP-006	MW-5S	Water	12/05/2016	16:45	X	X	X	X	
WG-080987-120516-BP-007	MW-5S	Water	12/05/2016	16:46	X	X	X	X	Field Duplicate (MW-5S)
TRIP BLANKS	--	Water	12/06/2016	0:00			X		Trip Blank
WG-080987-120616-BP-008	MW-2S	Water	12/06/2016	9:40	X	X	X	X	
WG-080987-120616-BP-009	MW-2	Water	12/06/2016	10:40	X	X	X	X	
WG-080987-120616-BP-010	MW-13S	Water	12/06/2016	12:20	X	X	X	X	
RB-080987-120616-BP-012	MW-12S	Water	12/06/2016	13:00	X	X	X	X	Rinse Blank
WG-080987-120616-BP-011	MW-12S	Water	12/06/2016	13:25	X	X	X	X	

Notes:

MS/MSD	- Matrix Spike/Matrix Spike Duplicate
PCB	- Polychlorinated biphenyls
SVOC	- Semi-volatile Organic Compounds
TAL	- Target Analyte List
TCL	- Target Compound List
TICs	- Tentatively Identified Compounds

Table 2

Analytical Results Summary
Semiannual Groundwater Monitoring
Friedrichsohn Cooperage/General Electric Company SI Group
Waterford, New York
December 2016

Sample Location:	MW-2	MW-2S	MW-5	MW-5S	MW-5S	MW-6
Sample ID:	WG-080987-120616-BP-009	WG-080987-120616-BP-008	WG-080987-120516-BP-005	WG-080987-120516-BP-006	WG-080987-120516-BP-007	WG-080987-120516-BP-003
Date	12/6/2016	12/6/2016	12/5/2016	12/5/2016	12/5/2016	12/5/2016
Parameters	Units				Duplicate	
Volatile Organic Compounds						
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	10 U	10 U	100 U	10 U	10 U
2-Hexanone	ug/L	5.0 U	5.0 U	50 U	5.0 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	5.0 U	5.0 U	50 U	5.0 U	5.0 U
Acetone	ug/L	10 U	10 U	100 U	10 U	11
Benzene	ug/L	1.0 U	1.0 U	10 U	4.4	1.0 U
Bromodichloromethane	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Bromoform	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Carbon disulfide	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Carbon tetrachloride	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Chlorobenzene	ug/L	1.0 U	1.0 U	10 U	50	1.0 U
Chloroethane	ug/L	1.0 UJ	1.0 UJ	10 UJ	1.0 UJ	1.0 UJ
Chloroform (Trichloromethane)	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	270	49	2.2
cis-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Cyclohexane	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Dibromochloromethane	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	1.0 UJ	1.0 UJ	10 UJ	1.0 UJ	1.0 UJ
Ethylbenzene	ug/L	1.1	1.5	10 U	5.3	4.7
Isopropyl benzene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Methyl acetate	ug/L	2.5 U	2.5 U	25 U	2.5 U	2.5 U
Methyl cyclohexane	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Methylene chloride	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Styrene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Toluene	ug/L	1.9	2.8	10 U	15	15
trans-1,2-Dichloroethene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Trichloroethene	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	ug/L	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Vinyl chloride	ug/L	1.0 UJ	1.0 UJ	36 J	53 J	1.0 UJ
Xylenes (total)	ug/L	3.2	5.5	20 U	16	17
TIC Volatile Organic Compounds						
Silanol, trimethyl- A	ug/L	--	--	--	--	--
Unknown 1	ug/L	--	--	--	--	--
Semi-volatile Organic Compounds						
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U
2,4,5-Trichlorophenol	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U

Table 2

Analytical Results Summary
Semiannual Groundwater Monitoring
Friedrichsohn Cooperage/General Electric Company SI Group
Waterford, New York
December 2016

Sample Location:		MW-2	MW-2S	MW-5	MW-5S	MW-5S	MW-6
Sample ID:		WG-080987-120616-BP-009	WG-080987-120616-BP-008	WG-080987-120516-BP-005	WG-080987-120516-BP-006	WG-080987-120516-BP-007	WG-080987-120516-BP-003
Date		12/6/2016	12/6/2016	12/5/2016	12/5/2016	12/5/2016 Duplicate	12/5/2016
Parameters	Units						
Semi-volatile Organic Compounds (Continued...)							
2,4,6-Trichlorophenol	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
2,4-Dichlorophenol	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
2,4-Dimethylphenol	ug/L	4.9 U	4.6 U	4.9 U	8.7	9.2	4.9
2,4-Dinitrophenol	ug/L	9.7 U	9.3 U	9.7 U	9.4 U	9.4 U	9.4 U
2,4-Dinitrotoluene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
2,6-Dinitrotoluene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
2-Chloronaphthalene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
2-Chlorophenol	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
2-Methylnaphthalene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
2-Methylphenol	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	5.6
2-Nitroaniline	ug/L	9.7 U	9.3 U	9.7 U	9.4 U	9.4 U	9.4 U
2-Nitrophenol	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
3,3'-Dichlorobenzidine	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
3-Nitroaniline	ug/L	9.7 U	9.3 U	9.7 U	9.4 U	9.4 U	9.4 U
4,6-Dinitro-2-methylphenol	ug/L	9.7 U	9.3 U	9.7 U	9.4 U	9.4 U	9.4 U
4-Bromophenyl phenyl ether	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
4-Chloro-3-methylphenol	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
4-Chloroaniline	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
4-Chlorophenyl phenyl ether	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
4-Methylphenol	ug/L	9.7 U	9.3 U	9.7 U	9.4 U	9.4 U	9.4 U
4-Nitroaniline	ug/L	9.7 U	9.3 U	9.7 U	9.4 U	9.4 U	9.4 U
4-Nitrophenol	ug/L	9.7 U	9.3 U	9.7 U	9.4 U	9.4 U	9.4 U
Acenaphthene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Acenaphthylene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Acetophenone	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Anthracene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Atrazine	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Benzaldehyde	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Benzo(a)anthracene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Benzo(a)pyrene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Benzo(b)fluoranthene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Benzo(g,h,i)perylene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Benzo(k)fluoranthene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Biphenyl (1,1-Biphenyl)	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
bis(2-Chloroethoxy)methane	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
bis(2-Chloroethyl)ether	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Butyl benzylphthalate (BBP)	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Caprolactam	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Carbazole	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Chrysene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Dibenz(a,h)anthracene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Dibenzofuran	ug/L	9.7 U	9.3 U	9.7 U	9.4 U	9.4 U	9.4 U
Diethyl phthalate	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Dimethyl phthalate	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Di-n-butylphthalate (DBP)	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Di-n-octyl phthalate (DnOP)	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Fluoranthene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Fluorene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Hexachlorobenzene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Hexachlorobutadiene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Hexachlorocyclopentadiene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Hexachloroethane	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Indeno(1,2,3-cd)pyrene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Isophorone	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Naphthalene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U

Table 2

Analytical Results Summary
Semiannual Groundwater Monitoring
Friedrichsohn Cooperage/General Electric Company SI Group
Waterford, New York
December 2016

Sample Location:		MW-2	MW-2S	MW-5	MW-5S	MW-5S	MW-6
Sample ID:		WG-080987-120616-BP-009	WG-080987-120616-BP-008	WG-080987-120516-BP-005	WG-080987-120516-BP-006	WG-080987-120516-BP-007	WG-080987-120516-BP-003
Date		12/6/2016	12/6/2016	12/5/2016	12/5/2016	12/5/2016	12/5/2016
Parameters	Units					Duplicate	
Semi-volatile Organic Compounds (Continued...)							
Nitrobenzene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
N-Nitrosodi-n-propylamine	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
N-Nitrosodiphenylamine	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Pentachlorophenol	ug/L	9.7 U	9.3 U	9.7 U	9.4 U	9.4 U	9.4 UJ
Phenanthrene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
Phenol	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	11
Pyrene	ug/L	4.9 U	4.6 U	4.9 U	4.7 U	4.7 U	4.7 U
TIC Semi-volatile Organic Compounds							
1,2,3,4-Tetrahydro-2,5,8-trimethyl-naphthalene A	ug/L	--	--	--	--	--	--
1,4-Dioxane A	ug/L	--	--	--	--	--	--
1-Methyl-2-pyrrolidinone A	ug/L	--	--	--	--	--	--
1-Methyl-2-pyrrolidinone B	ug/L	--	--	--	--	--	--
2-(2-(4-(1,1,3,3-tetramethylbutyl)phenoxy)ethoxy)-ethanol A	ug/L	--	--	--	--	--	--
2,6-Dimethylphenol A	ug/L	--	--	--	--	--	--
2-Ethyl-6-methyl-phenol A	ug/L	--	--	--	--	--	--
2-Ethyl-ethanoic acid A	ug/L	--	1.5 NJ	--	--	--	--
2-Ethyl-hexanoic acid A	ug/L	--	--	--	--	--	--
2-Ethyl-phenol A	ug/L	--	--	--	--	--	--
2-Ethyl-phenol B	ug/L	--	--	--	--	--	--
3,4-Dimethyl-phenol A	ug/L	--	--	--	--	--	--
3,5-Dimethyl-phenol A	ug/L	--	--	--	--	--	3.7 NJ
3-Ethyl-5-methyl-phenol A	ug/L	--	--	--	--	--	--
3-tert-Butylphenol A	ug/L	--	--	--	--	--	7.5 NJ
4-(1-Methylpropyl)-phenol A	ug/L	--	--	--	--	--	--
4-Chlorobenzoic acid A	ug/L	--	--	--	--	--	--
4-Isopropylphenol A	ug/L	--	--	--	--	--	--
9-Octadecenamide, (z)- A	ug/L	--	3.7 NJ	--	--	--	--
Benzene, 1,3-diemthyl- A	ug/L	7.2 NJ	--	6.6 NJ	--	--	12 NJ
Benzene, 1,3-diemthyl- B	ug/L	--	--	--	--	--	--
Benzenesulfonamide, 2-methyl A	ug/L	--	--	--	--	--	1.9 NJ
Benzenesulfonamide, 4-methyl- A	ug/L	--	--	--	--	--	3.5 NJ
Benzoic acid, 3,5-bis(1,1-dimethylethyl) A	ug/L	--	--	--	--	--	--
Bisphenol A A	ug/L	--	--	--	4.3 NJ	4.5 NJ	4.2 NJ
Chlorobenzene A	ug/L	--	--	--	34 NJ	30 NJ	--
Dehydroabietic acid A	ug/L	--	--	--	--	--	--
Diphenyl ether A	ug/L	--	--	--	4.2 NJ	3.9 NJ	--
Dodecanamide A	ug/L	--	--	--	--	--	--
Ethylbenzene A	ug/L	--	1.7 NJ	2.3 NJ	6.4 NJ	--	3.9 NJ
Hexadecanoic acid A	ug/L	--	--	3.3 NJ	9.5 NJ	17 NJ	6.6 NJ
m-Ethylphenol A	ug/L	--	--	--	--	--	--
m-Ethylphenol B	ug/L	--	--	--	--	--	--
Nonanoic acid A	ug/L	--	3.2 NJ	--	--	--	--
Octadecanoic acid A	ug/L	--	--	--	4.1 NJ	7.3 NJ	1.9 NJ
p-(tert-aryl)phenol	ug/L	--	--	--	2.2 J	--	--
Phenol, 2-(1-methylethyl)- A	ug/L	--	--	--	--	--	--
Phenol-p-tert-butyl- A	ug/L	--	--	--	16 NJ	15 NJ	--
p-Toluic acid A	ug/L	--	--	--	--	--	--
p-Xylene A	ug/L	--	--	--	13 NJ	12 NJ	--
Tetramethylbutylphenol A	ug/L	--	--	--	23 NJ	22 NJ	--
Toluene A	ug/L	3.7 NJ	3.9 NJ	7.2 NJ	15 NJ	12 NJ	9.3 NJ
Toluene B	ug/L	--	--	--	--	--	--
Unknown 1	ug/L	87 J	96 J	87 J	3.5 J	86 J	58 J
Unknown 2	ug/L	1.8 J	2.3 J	2.1 J	97 J	3.0 J	1.8 J
Unknown 3	ug/L	76 J	2.8 J	9.1 J	3.3 J	3.6 J	2.5 J
Unknown 4	ug/L	--	3.4 J	3.2 J	5.1 J	2.4 J	49 J

Table 2

Analytical Results Summary
Semiannual Groundwater Monitoring
Friedrichsohn Cooperage/General Electric Company SI Group
Waterford, New York
December 2016

Sample Location: Sample ID: Date		MW-2 WG-080987-120616-BP-009 12/6/2016	MW-2S WG-080987-120616-BP-008 12/6/2016	MW-5 WG-080987-120516-BP-005 12/5/2016	MW-5S WG-080987-120516-BP-006 12/5/2016	MW-5S WG-080987-120516-BP-007 12/5/2016 Duplicate	MW-6 WG-080987-120516-BP-003 12/5/2016
Parameters	Units						
TIC Semi-volatile Organic Compounds (Continued...)							
Unknown 5	ug/L	--	67 J	3.5 J	3.7 J	7.0 J	3.2 J
Unknown 6	ug/L	--	2.1 J	3.8 J	2.4 J	2.4 J	2.1 J
Unknown 7	ug/L	--	--	4.0 J	7.4 J	2.4 J	4.1 J
Unknown 8	ug/L	--	--	65 J	68 J	2.7 J	--
Unknown 9	ug/L	--	--	3.6 J	--	58 J	--
Unknown 10	ug/L	--	--	3.1 J	--	5.6 J	--
Unknown 11	ug/L	--	--	2.2 J	--	--	--
Unknown 12	ug/L	--	--	--	--	--	--
Unknown 13	ug/L	--	--	--	--	--	--
Unknown 14	ug/L	--	--	--	--	--	--
Unknown 15	ug/L	--	--	--	--	--	--
Xylene(ortho) A	ug/L	--	5.2 NJ	--	--	--	3.1 NJ
Metals							
Aluminum	mg/L	3.1	0.22	1.7	0.20 U	0.20 U	0.20 U
Antimony	mg/L	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Arsenic	mg/L	0.015 U	0.015 U	0.015 U	0.016	0.016	0.015 U
Barium	mg/L	0.53	0.044	0.20	0.23	0.22	0.46
Beryllium	mg/L	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
Cadmium	mg/L	0.0027	0.0020 U	0.0055	0.0020 U	0.0020 U	0.0020 U
Calcium	mg/L	68.9	39.3	107	53.3	51.5	7.6
Chromium	mg/L	0.0040 U	0.0040 U	0.0040 U	0.0040 U	0.0040 U	0.0040 U
Cobalt	mg/L	0.0040 U	0.0040 U	0.0040 U	0.0040 U	0.0040 U	0.0040 U
Copper	mg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Iron	mg/L	2.1	0.20	5.7	9.6	9.4	0.26
Lead	mg/L	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Magnesium	mg/L	20.9	6.9	36.3	9.7	9.3	0.31
Manganese	mg/L	0.80	0.0084	1.6	4.5	4.3	0.0030
Mercury	mg/L	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U
Nickel	mg/L	0.010 U	0.010 U	0.011	0.010 U	0.010 U	0.010 U
Potassium	mg/L	8.6 J	4.9	9.2 J	2.8	2.7	6.4
Selenium	mg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Silver	mg/L	0.0060 U	0.0060 U	0.0060 U	0.0060 U	0.0060 U	0.0060 U
Sodium	mg/L	144	217	88.1	99.3	96.5	110
Thallium	mg/L	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Vanadium	mg/L	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
Zinc	mg/L	0.063	0.010 U	0.11	0.010 U	0.010 U	0.025
PCBs							
Aroclor-1016 (PCB-1016)	ug/L	0.46 U	0.51 U	0.46 U	0.46 U	0.47 U	0.46 U
Aroclor-1221 (PCB-1221)	ug/L	0.46 U	0.51 U	0.46 U	0.46 U	0.47 U	0.46 U
Aroclor-1232 (PCB-1232)	ug/L	0.46 U	0.51 U	0.46 U	1.3	1.2	0.46 U
Aroclor-1242 (PCB-1242)	ug/L	0.46 U	0.51 U	0.46 U	0.46 U	0.47 U	0.46 U
Aroclor-1248 (PCB-1248)	ug/L	0.46 U	0.51 U	0.46 U	0.46 U	0.47 U	0.46 U
Aroclor-1254 (PCB-1254)	ug/L	0.46 U	0.51 U	0.46 U	0.46 U	0.47 U	0.46 U
Aroclor-1260 (PCB-1260)	ug/L	0.46 U	0.51 U	0.46 U	0.46 U	0.47 U	0.46 U

Table 2

Analytical Results Summary
Semiannual Groundwater Monitoring
Friedrichsohn Cooperage/General Electric Company SI Group
Waterford, New York
December 2016

Sample Location: Sample ID: Date		MW-6S WG-080987-120516-BP-004 12/5/2016	MW-8 WG-080987-120516-BP-001 12/5/2016	MW-10 WG-080987-120516-BP-002 12/5/2016	MW-12S WG-080987-120616-BP-011 12/6/2016	MW-13S WG-080987-120616-BP-010 12/6/2016
Parameters	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
1,1,2-Trichloroethane	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
1,2-Dichlorobenzene	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
1,2-Dichloropropane	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	250 U	10 U	4000 U	10 U	10 U
2-Hexanone	ug/L	130 U	5.0 U	2000 U	5.0 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	130 U	5.0 U	2000 U	5.0 U	5.0 U
Acetone	ug/L	610	10 U	4000 U	10 U	10 U
Benzene	ug/L	48	9.8	400 U	1.0 U	1.0 U
Bromodichloromethane	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Bromoform	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Carbon disulfide	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Carbon tetrachloride	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Chlorobenzene	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Chloroethane	ug/L	25 UJ	1.0 UJ	400 UJ	1.0 UJ	1.0 UJ
Chloroform (Trichloromethane)	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/L	620	1.0 U	400 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Cyclohexane	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Dibromochloromethane	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	25 UJ	1.0 UJ	400 UJ	1.0 UJ	1.0 UJ
Ethylbenzene	ug/L	270	1.0 U	4300	1.0 U	1.0 U
Isopropyl benzene	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Methyl acetate	ug/L	63 U	2.5 U	1000 U	2.5 U	2.5 U
Methyl cyclohexane	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Methyl tert butyl ether (MTBE)	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Methylene chloride	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Styrene	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Tetrachloroethene	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Toluene	ug/L	1300	1.0 U	17000	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Trichloroethene	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Trifluorotrichloroethane (CFC-113)	ug/L	25 U	1.0 U	400 U	1.0 U	1.0 U
Vinyl chloride	ug/L	81 J	1.0 UJ	400 UJ	1.0 UJ	1.0 UJ
Xylenes (total)	ug/L	1000	2.0 U	16000	2.0 U	2.0 U
TIC Volatile Organic Compounds						
Silanol, trimethyl- A	ug/L	--	55 NJ	--	12 NJ	--
Unknown 1	ug/L	--	--	--	--	12 J
Semi-volatile Organic Compounds						
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
2,4,5-Trichlorophenol	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U

Table 2

Analytical Results Summary
Semiannual Groundwater Monitoring
Friedrichsohn Cooperage/General Electric Company SI Group
Waterford, New York
December 2016

Sample Location:		MW-6S	MW-8	MW-10	MW-12S	MW-13S
Sample ID:		WG-080987-120516-BP-004	WG-080987-120516-BP-001	WG-080987-120516-BP-002	WG-080987-120616-BP-011	WG-080987-120616-BP-010
Date		12/5/2016	12/5/2016	12/5/2016	12/6/2016	12/6/2016
Parameters	Units					
Semi-volatile Organic Compounds (Continued...)						
2,4,6-Trichlorophenol	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
2,4-Dichlorophenol	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
2,4-Dimethylphenol	ug/L	1500	4.6 U	7000	4.7 U	4.7 U
2,4-Dinitrophenol	ug/L	93 U	9.1 U	500 U	9.3 U	9.3 U
2,4-Dinitrotoluene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
2,6-Dinitrotoluene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
2-Chloronaphthalene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
2-Chlorophenol	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
2-Methylnaphthalene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
2-Methylphenol	ug/L	1200	4.6 U	3600 J	4.7 U	4.7 U
2-Nitroaniline	ug/L	93 U	9.1 U	500 U	9.3 U	9.3 U
2-Nitrophenol	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
3,3'-Dichlorobenzidine	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
3-Nitroaniline	ug/L	93 U	9.1 U	500 U	9.3 U	9.3 U
4,6-Dinitro-2-methylphenol	ug/L	93 U	9.1 U	500 U	9.3 U	9.3 U
4-Bromophenyl phenyl ether	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
4-Chloro-3-methylphenol	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
4-Chloroaniline	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
4-Chlorophenyl phenyl ether	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
4-Methylphenol	ug/L	3800	9.1 U	17000	9.3 U	9.3 U
4-Nitroaniline	ug/L	93 U	9.1 U	500 U	9.3 U	9.3 U
4-Nitrophenol	ug/L	93 U	9.1 U	500 U	9.3 U	9.3 U
Acenaphthene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Acenaphthylene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Acetophenone	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Anthracene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Atrazine	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Benzaldehyde	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Benzo(a)anthracene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Benzo(a)pyrene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Benzo(b)fluoranthene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Benzo(g,h,i)perylene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Benzo(k)fluoranthene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Biphenyl (1,1-Biphenyl)	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
bis(2-Chloroethoxy)methane	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
bis(2-Chloroethyl)ether	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Butyl benzylphthalate (BBP)	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Caprolactam	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Carbazole	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Chrysene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Dibenz(a,h)anthracene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Dibenzofuran	ug/L	93 U	9.1 U	500 U	9.3 U	9.3 U
Diethyl phthalate	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Dimethyl phthalate	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Di-n-butylphthalate (DBP)	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Di-n-octyl phthalate (DnOP)	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Fluoranthene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Fluorene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Hexachlorobenzene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Hexachlorobutadiene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Hexachlorocyclopentadiene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Hexachloroethane	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Indeno(1,2,3-cd)pyrene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Isophorone	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U
Naphthalene	ug/L	47 U	4.6 U	250 U	4.7 U	4.7 U

Table 2

Analytical Results Summary
Semiannual Groundwater Monitoring
Friedrichsohn Cooperage/General Electric Company SI Group
Waterford, New York
December 2016

Sample Location: Sample ID: Date	MW-6S WG-080987-120516-BP-004 12/5/2016	MW-8 WG-080987-120516-BP-001 12/5/2016	MW-10 WG-080987-120516-BP-002 12/5/2016	MW-12S WG-080987-120616-BP-011 12/6/2016	MW-13S WG-080987-120616-BP-010 12/6/2016
Parameters	Units				
Semi-volatile Organic Compounds (Continued...)					
Nitrobenzene	ug/L	47 U	4.6 U	250 U	4.7 U
N-Nitrosodi-n-propylamine	ug/L	47 U	4.6 U	250 U	4.7 U
N-Nitrosodiphenylamine	ug/L	47 U	4.6 U	250 U	4.7 U
Pentachlorophenol	ug/L	93 U	9.1 UJ	500 U	9.3 U
Phenanthrene	ug/L	47 U	4.6 U	250 U	4.7 U
Phenol	ug/L	2300	4.6 U	22000	4.7 U
Pyrene	ug/L	47 U	4.6 U	250 U	4.7 U
TIC Semi-volatile Organic Compounds					
1,2,3,4-Tetrahydro-2,5,8-trimethyl-naphthalene A	ug/L	--	--	--	4.1 NJ
1,4-Dioxane A	ug/L	--	--	--	2.3 NJ
1-Methyl-2-pyrrolidinone A	ug/L	380 NJ	--	5700 NJ	--
1-Methyl-2-pyrrolidinone B	ug/L	1000 NJ	--	--	--
2-(2-(4-(1,1,3,3-tetramethylbutyl)phenoxy)ethoxy)-ethanol A	ug/L	--	4.6 NJ	--	--
2,6-Dimethylphenol A	ug/L	180 NJ	--	--	--
2-Ethyl-6-methyl-phenol A	ug/L	170 NJ	--	--	--
2-Ethyl-ethanoic acid A	ug/L	--	--	--	--
2-Ethyl-hexanoic acid A	ug/L	520 NJ	--	--	--
2-Ethyl-phenol A	ug/L	520 NJ	--	--	--
2-Ethyl-phenol B	ug/L	320 NJ	--	--	--
3,4-Dimethyl-phenol A	ug/L	540 NJ	--	2200 NJ	--
3,5-Dimethyl-phenol A	ug/L	--	--	--	--
3-Ethyl-5-methyl-phenol A	ug/L	110 NJ	--	--	--
3-tert-Butylphenol A	ug/L	400 NJ	--	2100 NJ	--
4-(1-Methylpropyl)-phenol A	ug/L	200 NJ	--	1700 NJ	--
4-Chlorobenzoic acid A	ug/L	120 NJ	--	--	--
4-Isopropylphenol A	ug/L	260 NJ	--	--	--
9-Octadecanamide, (z)- A	ug/L	--	--	--	5.4 NJ
Benzene, 1,3-diemthyl- A	ug/L	220 NJ	--	8200 NJ	--
Benzene, 1,3-diemthyl- B	ug/L	590 NJ	--	--	--
Benzenesulfonamide, 2-methyl A	ug/L	--	2.2 NJ	--	--
Benzenesulfonamide, 4-methyl- A	ug/L	--	--	--	--
Benzoic acid, 3,5-bis(1,1-dimethylethyl) A	ug/L	--	2.7 NJ	--	--
Bisphenol A A	ug/L	--	5.0 NJ	--	--
Chlorobenzene A	ug/L	--	--	--	--
Dehydroabietic acid A	ug/L	310 NJ	--	--	--
Diphenyl ether A	ug/L	--	--	--	--
Dodecanamide A	ug/L	--	--	--	2.3 NJ
Ethylbenzene A	ug/L	250 NJ	--	3100 NJ	--
Hexadecanoic acid A	ug/L	--	14 NJ	--	--
m-Ethylphenol A	ug/L	2800 NJ	--	9000 NJ	--
m-Ethylphenol B	ug/L	1800 NJ	--	--	--
Nonanoic acid A	ug/L	--	--	--	--
Octadecanoic acid A	ug/L	--	7.8 NJ	--	1.9 NJ
p-(tert-amyI)phenol	ug/L	--	--	--	5.9 NJ
Phenol, 2-(1-methylethyl)- A	ug/L	140 NJ	--	--	--
Phenol-p-tert-butyl- A	ug/L	450 NJ	13 NJ	--	--
p-Toluic acid A	ug/L	150 NJ	--	--	--
p-Xylene A	ug/L	--	--	--	--
Tetramethylbutylphenol A	ug/L	280 NJ	--	--	--
Toluene A	ug/L	670 NJ	4.1 NJ	8300 NJ	--
Toluene B	ug/L	720 NJ	--	--	--
Unknown 1	ug/L	490 J	76 J	1900 J	86 J
Unknown 2	ug/L	400 J	3.4 J	2000 J	2.2 J
Unknown 3	ug/L	240 J	11 J	1900 J	2.1 J
Unknown 4	ug/L	430 J	2.3 J	--	3.0 J

Table 2

Analytical Results Summary
Semiannual Groundwater Monitoring
Friedrichsohn Cooperage/General Electric Company SI Group
Waterford, New York
December 2016

Sample Location: Sample ID: Date		MW-6S WG-080987-120516-BP-004 12/5/2016	MW-8 WG-080987-120516-BP-001 12/5/2016	MW-10 WG-080987-120516-BP-002 12/5/2016	MW-12S WG-080987-120616-BP-011 12/6/2016	MW-13S WG-080987-120616-BP-010 12/6/2016
Parameters	Units					
TIC Semi-volatile Organic Compounds (Continued...)						
Unknown 5	ug/L	--	53 J	--	1.8 J	3.8 J
Unknown 6	ug/L	--	4.6 J	--	5.2 J	3.6 J
Unknown 7	ug/L	--	5.4 J	--	1.5 J	2.0 J
Unknown 8	ug/L	--	4.1 J	--	1.5 J	60 J
Unknown 9	ug/L	--	2.1 J	--	1.6 J	2.2 J
Unknown 10	ug/L	--	3.4 J	--	8.4 J	2.7 J
Unknown 11	ug/L	--	3.9 J	--	60 J	2.0 J
Unknown 12	ug/L	--	--	--	2.8 J	2.7 J
Unknown 13	ug/L	--	--	--	13 J	3.8 J
Unknown 14	ug/L	--	--	--	2.3 J	5.0 J
Unknown 15	ug/L	--	--	--	--	14 J
Xylene(ortho) A	ug/L	--	--	2800 NJ	--	--
Metals						
Aluminum	mg/L	0.35	0.20 U	3.9	0.26	0.23
Antimony	mg/L	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Arsenic	mg/L	0.015 U	0.016	0.084	0.015 U	0.015 U
Barium	mg/L	0.047	0.13	0.28	0.16	0.16
Beryllium	mg/L	0.0020 U	0.0020 U	0.0026	0.0020 U	0.0020 U
Cadmium	mg/L	0.0020 U	0.0020 U	0.0038	0.0020 U	0.0020 U
Calcium	mg/L	5.3	86.5	9.3	44.1	51.8
Chromium	mg/L	0.0080	0.0040 U	0.073	0.0040 U	0.0040 U
Cobalt	mg/L	0.0040 U	0.0040 U	0.015	0.0040 U	0.0040 U
Copper	mg/L	0.081	0.010 U	0.33	0.010 U	0.010 U
Iron	mg/L	1.5	9.7	12.7	2.3	2.3
Lead	mg/L	0.038	0.010 U	0.23	0.010 U	0.010 U
Magnesium	mg/L	1.1	17.5	0.59	12.2	19.2
Manganese	mg/L	0.23	11.1	0.67	0.65	5.9
Mercury	mg/L	0.00020 U	0.00020 U	0.00078	0.00020 U	0.00020 U
Nickel	mg/L	0.037	0.010 U	0.15	0.010 U	0.010 U
Potassium	mg/L	1.6	5.6	10.2	3.5	3.6
Selenium	mg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Silver	mg/L	0.0060 U	0.0060 U	0.0060 U	0.0060 U	0.0060 U
Sodium	mg/L	506	240	1200	76.1	83.1
Thallium	mg/L	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Vanadium	mg/L	0.037	0.0050 U	0.30	0.0050 U	0.0050 U
Zinc	mg/L	0.035	0.010 U	0.061	0.015	0.010 U
PCBs						
Aroclor-1016 (PCB-1016)	ug/L	0.93 U	0.46 U	13 U	0.47 U	0.47 U
Aroclor-1221 (PCB-1221)	ug/L	0.93 U	0.46 U	13 U	0.47 U	0.47 U
Aroclor-1232 (PCB-1232)	ug/L	0.93 U	5.6 J	13 U	0.47 U	0.47 U
Aroclor-1242 (PCB-1242)	ug/L	0.93 U	0.46 U	130	0.47 U	0.47 U
Aroclor-1248 (PCB-1248)	ug/L	8.3 J	0.46 U	13 U	0.47 U	0.47 U
Aroclor-1254 (PCB-1254)	ug/L	0.93 UJ	0.46 U	13 U	0.47 U	0.47 U
Aroclor-1260 (PCB-1260)	ug/L	0.93 UJ	0.46 U	13 U	0.47 U	0.47 U

Notes:

J - Estimated concentration
 NJ - Tentatively identified compound, estimated concentration
 U - Not detected at the associated reporting limit
 UJ - Not detected; associated reporting limit is estimated
 -- - Not applicable

Table 3

Analytical Methods
Semiannual Groundwater Monitoring
Friedrichsohn Cooperage/General Electric Company &SI Group
Waterford, New York
December 2016

Parameter	Method	Matrix	Preservation	Holding Time	
				Collection to Extraction (Days)	Collection or Extraction to Analysis (Days)
Volatile Organic Compounds (VOC)	SW-846 8260B	Water	pH < 2 and Iced, 0-6° C	-	14
Semi-Volatile Organic Compounds (SVOC)	SW-846 8270C	Water	Iced, 0-6° C	7	40
Polychlorinated Biphenyls (PCB)	SW-846 8082	Water	Iced, 0-6° C	7	40
Metals	SW-846 6010B	Water	pH < 2 and Iced, 0-6° C	-	180
Mercury	SW-846 7470A	Water	pH < 2 and Iced, 0-6° C	-	28

Notes:

Method References:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

Table 4

Qualified Sample Results Due to Outlying Continuing Calibration Results
Semiannual Groundwater Monitoring
Friedrichsohn Cooperage/General Electric Company & SI Group
Waterford, New York
December 2016

Parameter	Analyte	Calibration Date (mm/dd/yyyy)	%D	Associated Sample ID	Qualified Result	Units
VOC	Chloroethane	12/08/2016	26.8	WG-080987-120516-BP-001	1.0 UJ	µg/L
				WG-080987-120616-BP-010	1.0 UJ	µg/L
				WG-080987-120616-BP-011	1.0 UJ	µg/L
				WG-080987-120516-BP-002	400 UJ	µg/L
				WG-080987-120516-BP-003	1.0 UJ	µg/L
				WG-080987-120516-BP-004	25 UJ	µg/L
				WG-080987-120516-BP-005	10 UJ	µg/L
				WG-080987-120516-BP-006	1.0 UJ	µg/L
				WG-080987-120516-BP-007	1.0 UJ	µg/L
				WG-080987-120616-BP-008	1.0 UJ	µg/L
				WG-080987-120616-BP-009	1.0 UJ	µg/L
VOC	Dichlorodifluoromethane (CFC-12)	12/08/2016	26.0	WG-080987-120516-BP-001	1.0 UJ	µg/L
				WG-080987-120616-BP-010	1.0 UJ	µg/L
				WG-080987-120616-BP-011	1.0 UJ	µg/L
				WG-080987-120516-BP-002	400 UJ	µg/L
				WG-080987-120516-BP-003	1.0 UJ	µg/L
				WG-080987-120516-BP-004	25 UJ	µg/L
				WG-080987-120516-BP-005	10 UJ	µg/L
				WG-080987-120516-BP-006	1.0 UJ	µg/L
				WG-080987-120516-BP-007	1.0 UJ	µg/L
				WG-080987-120616-BP-008	1.0 UJ	µg/L
				WG-080987-120616-BP-009	1.0 UJ	µg/L
VOC	Vinyl chloride	12/08/2016	31.5	WG-080987-120516-BP-001	1.0 UJ	µg/L
				WG-080987-120616-BP-010	1.0 UJ	µg/L
				WG-080987-120616-BP-011	1.0 UJ	µg/L
				WG-080987-120516-BP-002	400 UJ	µg/L
				WG-080987-120516-BP-003	1.0 UJ	µg/L
				WG-080987-120516-BP-004	81 J	µg/L
				WG-080987-120516-BP-005	36 J	µg/L
				WG-080987-120516-BP-006	53 J	µg/L
				WG-080987-120516-BP-007	50 J	µg/L
				WG-080987-120616-BP-008	1.0 UJ	µg/L
				WG-080987-120616-BP-009	1.0 UJ	µg/L

Table 4

Qualified Sample Results Due to Outlying Continuing Calibration Results
Semiannual Groundwater Monitoring
Friedrichsohn Cooperage/General Electric Company &SI Group
Waterford, New York
December 2016

Parameter	Analyte	Calibration Date (mm/dd/yyyy)	%D	Associated Sample ID	Qualified Result	Units
SVOC	Pentachlorophenol	12/14/2016	-31.8	WG-080987-120516-BP-001	9.1 UJ	µg/L
				WG-080987-120516-BP-003	9.4 UJ	µg/L
Metals	Potassium	12/09/2016	172	WG-080987-120516-BP-005	9.2 J	mg/L
				WG-080987-120616-BP-009	8.6 J	mg/L

Notes:

%D - Percent difference

J - Estimated concentration

SVOC - Semi-volatile Organic Compounds

UJ - Not detected; associated reporting limit is estimated

VOC - Volatile Organic Compounds

Table 5

**Qualified Sample Data Due to Outlying of Surrogate Recoveries
Semiannual Groundwater Monitoring
Friedrichsohn Cooperage/General Electric Company &SI Group
Waterford, New York
December 2016**

Parameter	Sample ID	Surrogate	Surrogate % Recovery	<u>Control Limits</u> % Recovery	Analyte	Qualified Result	Units
PCB	WG-080987-120516-BP-001	Tetrachloro-m-xylene	122	39-121	PCB-1232	5.6 J	µg/L

Notes:

- J - Estimated concentration
PCB - Polychlorinated Biphenyls

Table 6

Qualified Sample Results Due to Outlying MS/MSD Results
Semiannual Groundwater Monitoring
Friedrichsohn Cooperage/General Electric Company &SI Group
Waterford, New York
December 2016

Parameter	Sample ID	Analyte	MS	MSD	RPD (percent)	Control Limits		Qualified Result	Units
			% Recovery	% Recovery		% Recovery	RPD		
PCB	WG-080987-120516-BP-004	PCB-1260	14	19	32	25-131	50	0.93 UJ	µg/L
		PCB-1248						8.3 J	µg/L
		PCB-1254						0.93 UJ	µg/L

Notes:

- J - Estimated concentration
- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- PCB - Polychlorinated Biphenyls
- RPD - Relative Percent Difference
- UJ - Not detected; associated reporting limit is estimated

Attachment D

Table D.1

Historical Groundwater Sampling Results
Groundwater Monitoring Program
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-09	PES-1	MW-10	MW-10	MW-10	MW-14	MW-15
Sample ID:			FC-MW-9	WG-80987-060614-BP-114	FC-MW-10	WG-80987-060614-BP-115	WG-80987-060614-BP-116	WG-80987-060514-BP-112	WG-80987-060614-BP-113
Sample Date:			10/8/2009	6/6/2014	10/8/2009	6/6/2014	6/6/2014 Duplicate	6/5/2014	6/6/2014
Parameters	Units	NYSDEC GA							
Volatile Organic Compounds									
1,1,1-Trichloroethane	µg/L	5	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	5	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	1	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 UJ
1,1-Dichloroethane	µg/L	5	1 U	2.7 J	100 U	1000 U	1000 U	0.76 J	2.1 J
1,1-Dichloroethene	µg/L	5	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
1,2,4-Trichlorobenzene	µg/L	5	1 U	5.0 U	100 U	1000 U	1000 U	2.0 J	1.8 J
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	0.04	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	0.0006	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 UJ
1,2-Dichlorobenzene	µg/L	3*	1 U	5.0 U	100 U	1000 U	1000 U	0.89 J	16
1,2-Dichloroethane	µg/L	0.6	1 U	3.9 J	100 U	1000 U	1000 U	5.0 U	1.9 J
1,2-Dichloropropane	µg/L	1	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
1,3-Dichlorobenzene	µg/L	3*	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	1.1 J
1,4-Dichlorobenzene	µg/L	3*	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	6.8
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L		5 U	5.0 U	500 U	1000 U	1000 U	5.0 U	5.0 U
2-Hexanone	µg/L		5 U	5.0 U	500 U	1000 U	1000 U	5.0 U	5.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L		5 U	18	500 U	1000 U	1000 U	5.0 U	4.2 J
Acetone	µg/L		5 U	290	1800	1000 U	1000 U	60	5.0 U
Benzene	µg/L	1	1 U	18	190	1000 U	120 J	13	15
Bromodichloromethane	µg/L		1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
Bromoform	µg/L		1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	5	1 U	5.0 U	100 U	1000 UJ	1000 U	5.0 U	5.0 U
Carbon disulfide	µg/L	60	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
Carbon tetrachloride	µg/L	5	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
Chlorobenzene	µg/L	5	1 U	8.6	170	1000 U	140 J	2.0 J	43
Chloroethane	µg/L	5	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	7	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	5	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	5	1 U	19	100 U	1000 U	1000 U	14	330
cis-1,3-Dichloropropene	µg/L	0.4*	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
Cyclohexane	µg/L		1 U	0.93 J	100 U	1000 U	1000 U	2.5 J	1.9 J
Dibromochloromethane	µg/L		1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
Ethylbenzene	µg/L	5	1 U	74	5400	2900	3000	640	92
Isopropyl benzene	µg/L	5	1 U	2.7 J	73 J	1000 U	1000 U	4.7 J	2.1 J
m&p-Xylenes	µg/L	5	2 U	180	16000	8100	8400	1700	250
Methyl acetate	µg/L		1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
Methyl cyclohexane	µg/L		1 U	2.2 J	100 U	1000 U	1000 U	1.2 J	5.0 U
Methyl tert butyl ether (MTBE)	µg/L		1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
Methylene chloride	µg/L	5	1 U	4.3 J	100 U	1000 U	1000 U	5.0 U	1.0 J
o-Xylene	µg/L	5	1 U	69	4900	2500	2600	540	87
Styrene	µg/L	5	1 U	5.0 U	120	1000 U	1000 U	5.0 U	5.0 U
Tetrachloroethene	µg/L	5	1 U	0.66 J	86 J	1000 U	1000 U	1.5 J	2.0 J
Toluene	µg/L	5	1 U	660	25000 D	21000	21000	1400	560
trans-1,2-Dichloroethene	µg/L	5	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	9.2
trans-1,3-Dichloropropene	µg/L	0.4*	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
Trichloroethene	µg/L	5	1 U	13	240	230 J	230 J	13	5.4
Trichlorofluoromethane (CFC-11)	µg/L	5	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
Trifluorotrichloroethane (Freon 113)	µg/L	5	1 U	5.0 U	100 U	1000 U	1000 U	5.0 U	5.0 U
Vinyl chloride	µg/L	2	1 U	3.1 J	100 U	1000 U	1000 U	1.2 J	130
Xylenes (total)	µg/L	5	-	250	-	11000	11000	2200	330
Semi-volatile Organic Compounds									
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	5	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
2,4,5-Trichlorophenol	µg/L	1*	11 UJ	200 U	1000 U	17 J	14 J	80 U	20 U
2,4,6-Trichlorophenol	µg/L	1*	11 UJ	100 U	100 J	31 J	23 J	40 U	10 U

Table D.1
Historical Groundwater Sampling Results
Groundwater Monitoring Program
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-09	PES-1	MW-10	MW-10	MW-10	MW-14	MW-15
Sample ID:			FC-MW-9	WG-80987-060614-BP-114	FC-MW-10	WG-80987-060614-BP-115	WG-80987-060614-BP-116	WG-80987-060514-BP-112	WG-80987-060614-BP-113
Sample Date:			10/8/2009	6/6/2014	10/8/2009	6/6/2014	6/6/2014 Duplicate	6/5/2014	6/6/2014
Parameters	Units	NYSDEC GA							
2,4-Dichlorophenol	µg/L	5	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
2,4-Dimethylphenol	µg/L	1*	11 UJ	1900	11000 D	12000	15000	120	78 J
2,4-Dinitrophenol	µg/L	1*	11 UJ	200 U	1000 UJ	200 U	200 U	80 U	20 U
2,4-Dinitrotoluene	µg/L	5	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
2,6-Dinitrotoluene	µg/L	5	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
2-Chloronaphthalene	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
2-Chlorophenol	µg/L	1*	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
2-Methylnaphthalene	µg/L		11 UJ	100 U	1000 U	100 U	11 J	40 U	10 U
2-Methylphenol	µg/L	1*	11 UJ	540	8700 D	4400 J	5300	41	28 J
2-Nitroaniline	µg/L	5	11 UJ	200 U	1000 U	200 U	200 U	80 U	20 U
2-Nitrophenol	µg/L	1*	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
3&4-Methylphenol	µg/L	1*	11 UJ	2800	33000 D	17000	20000	120	56 J
3,3'-Dichlorobenzidine	µg/L	5	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
3-Nitroaniline	µg/L	5	11 UJ	200 U	1000 U	200 U	200 U	80 U	20 U
4,6-Dinitro-2-methylphenol	µg/L	1*	11 UJ	200 U	1000 UJ	200 U	200 U	80 U	20 U
4-Bromophenyl phenyl ether	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
4-Chloro-3-methylphenol	µg/L	1*	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
4-Chloroaniline	µg/L	5	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
4-Chlorophenyl phenyl ether	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
4-Nitroaniline	µg/L	5	11 UJ	200 U	1000 U	200 U	200 U	80 U	20 U
4-Nitrophenol	µg/L	1*	11 UJ	200 U	1000 U	200 U	200 U	80 U	20 U
Acenaphthene	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Acenaphthylene	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Acetophenone	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Anthracene	µg/L		11 UJ	25 J	1000 U	100 U	100 U	40 U	10 U
Atrazine	µg/L	7.5	11 UJ	100 UJ	1000 U	100 UJ	100 UJ	40 UJ	10 UJ
Benzaldehyde	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Benzo(a)anthracene	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Benzo(a)pyrene	µg/L	ND	11 U	100 U	1000 U	100 U	100 U	40 U	10 U
Benzo(b)fluoranthene	µg/L		11 U	100 U	1000 U	100 U	100 U	40 U	10 U
Benzo(g,h,i)perylene	µg/L		11 U	100 U	1000 U	100 U	100 U	40 U	10 U
Benzo(k)fluoranthene	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Biphenyl (1,1-Biphenyl)	µg/L	5	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
bis(2-Chloroethoxy)methane	µg/L	5	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
bis(2-Chloroethyl)ether	µg/L	1	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	5	11 UJ	100 U	110 J	100 U	100 U	40 U	10 U
Butyl benzylphthalate (BBP)	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Caprolactam	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Carbazole	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Chrysene	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Dibenz(a,h)anthracene	µg/L		11 U	100 U	1000 U	100 U	100 U	40 U	10 U
Dibenzofuran	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Diethyl phthalate	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Dimethyl phthalate	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Di-n-butylphthalate (DBP)	µg/L	50	11 UJ	100 U	1000 U	100 U	100 U	40 U	2.8 J
Di-n-octyl phthalate (DnOP)	µg/L		11 U	100 U	1000 U	100 U	100 U	40 U	10 U
Fluoranthene	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Fluorene	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Hexachlorobenzene	µg/L	0.04	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Hexachlorobutadiene	µg/L	0.5	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Hexachlorocyclopentadiene	µg/L	5	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Hexachloroethane	µg/L	5	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Indeno(1,2,3-cd)pyrene	µg/L		11 U	100 U	1000 U	100 U	100 U	40 U	10 U
Isophorone	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Naphthalene	µg/L		11 UJ	100 U	1000 U	60 J	44 J	6.6 J	10 U
Nitrobenzene	µg/L	0.4	11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U

Table D.1

Historical Groundwater Sampling Results
Groundwater Monitoring Program
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-09	PES-1	MW-10	MW-10	MW-10	MW-14	MW-15
Sample ID:			FC-MW-9	WG-80987-060614-BP-114	FC-MW-10	WG-80987-060614-BP-115	WG-80987-060614-BP-116	WG-80987-060514-BP-112	WG-80987-060614-BP-113
Sample Date:			10/8/2009	6/6/2014	10/8/2009	6/6/2014	6/6/2014 Duplicate	6/5/2014	6/6/2014
Parameters	Units	NYSDEC GA							
N-Nitrosodi-n-propylamine	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
N-Nitrosodiphenylamine	µg/L		11 UJ	100 U	1000 U	100 U	100 U	40 U	10 U
Pentachlorophenol	µg/L	1*	11 UJ	200 U	1000 U	200 U	200 U	80 U	20 U
Phenanthrene	µg/L		11 UJ	110	1000 U	100 U	100 U	40 U	10 U
Phenol	µg/L	1	11 UJ	2500	80000 D	13000	14000	65	28 J
Pyrene	µg/L		11 UJ	21 J	1000 U	100 U	100 U	40 U	10 U
Metals									
Aluminum	µg/L		159	20400	2790	4390	3880	11800	11400
Antimony	µg/L	3	6 J	1.5 J	14 J	5.1 J	4.8 J	1.1 J	6.0 U
Arsenic	µg/L	25	10 U	92.7	168	64.9	63.5	18.0	25.0
Barium	µg/L	1000	1860	1920	724	471	464	177	421
Beryllium	µg/L		3 U	3.0 U	7.82	20 U	20 U	3.0 U	3.0 U
Cadmium	µg/L	5	3 U	3.0 U	3.13	20 U	20 U	3.0 U	3.0 U
Calcium	µg/L		18300	92700	17600	16100	15200	10700	19100
Chromium	µg/L	50	5 U	37.2	197	63.8	60.8	24.2	18.9
Cobalt	µg/L		15 U	30.0	37.7	20 U	20 U	11.0	14.7
Copper	µg/L	200	10 U	79.7 J	138	204 J	199 J	74.7 J	56.0 J
Cyanide (total)	µg/L	200	0.01 U	-	0.187	-	-	-	-
Iron	µg/L	300	296	240000 J	9920	15800 J	13900 J	19800 J	29200 J
Lead	µg/L	25	5.33 J	80.1 J	321	185 J	179 J	67.5 J	42.4 J
Magnesium	µg/L		5420	26200	361 J	10000 U	10000 U	4220	8130
Manganese	µg/L	300	87.2	5120	589	973	859	1240	7590
Mercury	µg/L	0.7	0.2 U	0.20 U	1.03 J	0.58	0.58	0.15 J	0.14 J
Nickel	µg/L	100	14.2 J	64.3 J	626	225 J	218 J	38.5 J	40.0 J
Potassium	µg/L		12400	17000	26400	13200	13000	4780	9290
Selenium	µg/L	10	10 U	15 UJ	45.4	100 UJ	100 UJ	15 UJ	15 UJ
Silver	µg/L	50	5 U	3.0 U	1.5 J	20 U	20 U	3.0 U	3.0 U
Sodium	µg/L	20000	225000	401000	1000 U	2050000	2030000	549000	398000
Thallium	µg/L		20 U	3.0 U	20 U	20 U	20 U	3.0 U	3.0 U
Vanadium	µg/L		20 U	72.2	904	443	444	64.6	30.4
Zinc	µg/L		25.8	224	97.7	69.9	61.9	76.2	92.0
PCBs									
Aroclor-1016 (PCB-1016)	µg/L	0.09*	0.05 U	2000 U	5 U	5.0 U	20 U	20 U	1.0 U
Aroclor-1221 (PCB-1221)	µg/L	0.09*	0.05 U	2000 U	5 U	5.0 U	20 U	20 U	1.0 U
Aroclor-1232 (PCB-1232)	µg/L	0.09*	0.05 U	2000 U	5 U	5.0 U	20 U	20 U	1.0 U
Aroclor-1242 (PCB-1242)	µg/L	0.09*	0.05 U	20000	2200	23 J	190 J	120	4.8
Aroclor-1248 (PCB-1248)	µg/L	0.09*	0.05 U	2000 U	5 U	5.0 U	20 U	20 U	1.0 U
Aroclor-1254 (PCB-1254)	µg/L	0.09*	0.05 U	2000 U	5 U	5.0 U	20 U	20 U	1.0 U
Aroclor-1260 (PCB-1260)	µg/L	0.09*	0.05 UJ	2000 U	5 UJ	5.0 U	20 U	20 U	1.0 UJ
Pesticides									
4,4'-DDD	µg/L	0.3	0.05 U	-	10 UJ	-	-	-	-
4,4'-DDE	µg/L	0.2	0.05 U	-	10 U	-	-	-	-
4,4'-DDT	µg/L	0.2	0.05 UJ	-	10 UJ	-	-	-	-
Aldrin	µg/L	ND	0.05 U	-	10 U	-	-	-	-
alpha-BHC	µg/L	0.01	0.05 U	-	10 U	-	-	-	-
alpha-Chlordane	µg/L		0.05 U	-	10 U	-	-	-	-
beta-BHC	µg/L	0.04	0.05 UJ	-	10 U	-	-	-	-
delta-BHC	µg/L	0.04	0.05 U	-	10 UJ	-	-	-	-
Dieldrin	µg/L	0.004	0.05 U	-	10 U	-	-	-	-
Endosulfan I	µg/L		0.05 U	-	10 U	-	-	-	-
Endosulfan II	µg/L		0.05 U	-	10 U	-	-	-	-
Endosulfan sulfate	µg/L		0.05 U	-	10 U	-	-	-	-
Endrin	µg/L	ND	0.05 U	-	10 UJ	-	-	-	-

Table D.1
Historical Groundwater Sampling Results
Groundwater Monitoring Program
Friedrichsohn Cooperage Site
Waterford, New York

Sample Location:			MW-09	PES-1	MW-10	MW-10	MW-10	MW-14	MW-15
Sample ID:			FC-MW-9	WG-80987-060614-BP-114	FC-MW-10	WG-80987-060614-BP-115	WG-80987-060614-BP-116	WG-80987-060514-BP-112	WG-80987-060614-BP-113
Sample Date:			10/8/2009	6/6/2014	10/8/2009	6/6/2014	6/6/2014 Duplicate	6/5/2014	6/6/2014
Parameters	Units	NYSDEC GA							
Endrin aldehyde	µg/L	5	0.05 U	-	10 U	-	-	-	-
Endrin ketone	µg/L	5	0.05 U	-	10 U	-	-	-	-
gamma-BHC (lindane)	µg/L	0.05	0.05 U	-	10 U	-	-	-	-
gamma-Chlordane	µg/L		0.05 U	-	10 U	-	-	-	-
Heptachlor	µg/L	0.04	0.05 U	-	10 U	-	-	-	-
Heptachlor epoxide	µg/L	0.03	0.05 U	-	10 U	-	-	-	-
Methoxychlor	µg/L	35	0.05 U	-	10 UJ	-	-	-	-
Toxaphene	µg/L	0.06	0.054 U	-	100 U	-	-	-	-

Notes:

- UNot detected at associated detection limit
- JEstimated value
- NDNon-Detect
- NYSDECNew York State Department of Environmental Conservation Class GA Standard - June 1998
- 0.4*GA Standard for total concentration of cis and trans of 1,3-dichloropropene
- 3*GA Standard for total concentration of 1,2-, 1,3-, 1,4-dichlorobenzene
- 1*GA standard for total phenolic compounds.
- 0.09*GA Standard for total PCBs
- Parameter concentration greater than corresponding Class GA standard

GROUNDWATER VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS
 FRIEDRICHSON COOPERAGE SITE (#5-46-045)
 WATERFORD, NEW YORK
 VALIDATED DATA

Sample ID	NYSDEC Class GA	FC-MW-1S 10/6/2009	FC-MW-1 10/5/2009	FC-MW-2S 10/6/2009	FC-MW-2 10/6/2009	FC-MW-3 10/6/2009	FC-MW-3RE 10/6/2009	FC-MW-4 10/7/2009	FC-MW-5S 10/6/2009	FC-MW-5 10/6/2009	FC-MW-6S 10/7/2009
Sampling Date											
Media											
Dilution											
Units											
Volatile Organic Compounds (VOCs)											
1,1,1-Trichloroethane	5	1 U	1 U	3.7	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	5	1 U	1 U	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane		1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	3.2
1,1-Dichloroethene	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	0.81 J
1,2,4-Trichlorobenzene	5	1 U	1 U	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-Chloropropane	0.04	1 U	1 U	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	3	1 U	1 U	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	0.6	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	4.2
1,2-Dichloropropane	1	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	3	1 U	1 U	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	3	1 U	1 U	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
2-Butanone	50	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	25
2-Hexanone	50*	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U
4-Methyl-2-Pentanone		5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	13
Acetone	50*	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	5 UJ	5 U	5 U	520
Benzene	1	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	9.7	1 U	9
Bromodichloromethane	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
Bromoform	50*	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
Bromomethane	5	1 UJ	1 U	1 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U
Carbon Disulfide		1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	92	1 U	10
Chloroethane	5	1 UJ	1 U	1 U	1 UJ	1 UJ	1 UJ	1 UJ	1.2	1 U	1 U
Chloroform	7	1 U	1 U	2.6	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
Chloromethane		1 UJ	1 U	1 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U
cis-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 UJ	1 U	4.4	3.6	14	260 E
cis-1,3-Dichloropropene	0.4**	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
Cyclohexane		1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	7
Dibromochloromethane	50	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
Ethyl Benzene	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	0.91 J	1 U	110
Isopropylbenzene	5	1 U	1 U	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U	3
m/p-Xylenes	5	2 U	2 U	2 U	2 U	2 UJ	2 U	2 U	0.97 J	2 U	270
Methyl Acetate		1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl Ether	10	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
Methylcyclohexane		1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1.5
Methylene Chloride	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	2.2 U
o-Xylene	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	0.86 J	1 U	120
Styrene	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
t-1,3-Dichloropropene	0.4**	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	1 U	1 U	0.5 J	1 U	1 UJ	1 U	1 U	1 U	1 U	0.68 J
Toluene	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	0.91 J	1 U	500 E
trans-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	0.7 J	1.1
Trichloroethene	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	3.9
Trichlorofluoromethane	5	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	2	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	15	2.7	31

NOTES:

J: Estimated value.

U: Not detected. Reporting limit shown.

B: The analyte was detected in an associated blank.

D: Diluted sample.

E: Concentration exceeds calibrated range of the instrument.

** Applies to the sum of these substances.

Highlighted results exceed the NYSDEC Class GA Standard.

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GROUNDWATER VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS
 FRIEDRICHSON COOPERAGE SITE (#5-46-045)
 WATERFORD, NEW YORK
VALIDATED DATA

Sample ID	NYSDEC Class GA	FC-MW-6SDL	FC-MW-6	FC-MW-7	FC-MW-X Dup of MW-7	FC-MW-8	FC-MW-9	FC-MW-10	FC-MW-10DL	FC-MW-11S
Sampling Date		10/7/2009	10/7/2009	10/7/2009	10/7/2009	10/7/2009	10/8/2009	10/8/2009	10/8/2009	10/6/2009
Media	Standard or	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution	Guidance Value	20	1	1	1	1	1	100	500	1
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Volatile Organic Compounds (VOCs)										
1,1,1-Trichloroethane	5	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
1,1,2,2-Tetrachloroethane	5	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
1,1,2-Trichloroethane	1	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
1,1,2-Trichlorotrifluoroethane		20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
1,1-Dichloroethane	5	20 U	1 U	1 U	1 U	0.89 J	1 U	100 U	500 U	1 U
1,1-Dichloroethene	5	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
1,2,4-Trichlorobenzene	5	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
1,2-Dibromo-3-Chloropropane	0.04	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
1,2-Dibromoethane	5	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
1,2-Dichlorobenzene	3	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
1,2-Dichloroethane	0.6	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
1,2-Dichloropropane	1	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
1,3-Dichlorobenzene	3	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
1,4-Dichlorobenzene	3	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
2-Butanone	50	100 U	5 U	5 U	5 U	5 U	5 U	500 U	2500 U	5 U
2-Hexanone	50*	100 U	5 U	5 UJ	5 U	5 UJ	5 U	500 U	2500 UJ	5 UJ
4-Methyl-2-Pentanone		100 U	5 U	5 U	5 U	5 U	5 U	500 U	2500 U	5 U
Acetone	50*	650 D	16	5 UJ	5 U	5 UJ	5 U	1800	2500 UJ	5 UJ
Benzene	1	20 U	1.2	1 U	1 U	1 U	1 U	190	500 U	1 U
Bromodichloromethane	5	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
Bromoform	50*	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
Bromomethane	5	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 UJ
Carbon Disulfide		20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
Carbon Tetrachloride	5	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
Chlorobenzene	5	20 U	1 U	1 U	1 U	1 U	1 U	170	500 U	1 U
Chloroethane	5	20 U	1 U	1 UJ	1 U	1 UJ	1 U	100 U	500 UJ	1 UJ
Chloroform	7	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
Chloromethane		20 U	1 U	1 UJ	1 U	1 UJ	1 U	100 U	500 UJ	1 UJ
cis-1,2-Dichloroethene	5	250 D	23	1 U	1 U	0.8 J	1 U	100 U	500 U	1 U
cis-1,3-Dichloropropene	0.4**	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
Cyclohexane		20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
Dibromochloromethane	50	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
Dichlorodifluoromethane	5	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
Ethyl Benzene	5	79 D	3.5	1 U	1 U	1.7	1 U	5400	5300 D	1 U
Isopropylbenzene	5	20 U	1 U	1 U	1 U	1 U	1 U	73 J	500 U	1 U
m/p-Xylenes	5	200 D	6.6	2 U	2 U	1.6 J	2 U	16000	15000 D	2 U
Methyl Acetate		20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
Methyl tert-butyl Ether	10	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
Methylcyclohexane		20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
Methylene Chloride	5	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
o-Xylene	5	78 D	5	1 U	1 U	1.2	1 U	4900	4200 D	1 U
Styrene	5	20 U	1 U	1 U	1 U	1 U	1 U	120	500 U	1 U
t-1,3-Dichloropropene	0.4**	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
Tetrachloroethene	5	20 U	1 U	1 U	1 U	1 U	1 U	86 J	500 U	1 U
Toluene	5	450 D	69	1 U	1 U	1 U	1 U	24000 E	25000 D	1 U
trans-1,2-Dichloroethene	5	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
Trichloroethene	5	20 U	1 U	1 U	1 U	1 U	1 U	240	500 U	1 U
Trichlorofluoromethane	5	20 U	1 U	1 U	1 U	1 U	1 U	100 U	500 U	1 U
Vinyl Chloride	2	20 U	6	1 U	1 U	1 U	1 U	100 U	500 U	1 U

NOTES:

J: Estimated value.

U: Not detected. Reporting limit shown.

B: The analyte was detected in an associated blank.

D: Diluted sample.

E: Concentration exceeds calibrated range of the instrument.

** Applies to the sum of these substances.

Highlighted results exceed the NYSDEC Class GA Standard.

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GROUNDWATER VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS
 FRIEDRICHSON COOPERAGE SITE (#5-46-045)
 WATERFORD, NEW YORK
 VALIDATED DATA

Sample ID	NYSDEC Class GA	FC-MW-11	MW-12	MW-13	FC-PZ-TOP	FC-PZ-BOT	FC-GW-35	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
Sampling Date		10/5/2009	9/30/2009	9/30/2009	10/7/2009	10/7/2009	10/7/2009	9/30/2009	10/6/2009	10/7/2009	10/8/2009
Media	Standard or	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution	Guidance Value	1	1	1	20	100	1	1	1	1	1
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Volatile Organic Compounds (VOCs)											
1,1,1-Trichloroethane	5	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	5	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane		1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	5	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	5	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	5	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-Chloropropane	0.04	1 U	1 U	1 UJ	20 U	100 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	5	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	3	1 U	1 U	1 U	30	100 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	0.6	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	1	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	3	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	3	1 U	1 U	1 U	34	100 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	50	5 U	5 U	5 U	100 U	500 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	50*	5 UJ	5 U	5 U	100 U	500 U	5 UJ	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone		5 U	5 U	5 U	100 U	500 U	5 U	5 U	5 U	5 U	5 U
Acetone	50*	5 UJ	5 UJ	5 U	710	500 U	5 UJ	5 UJ	5 U	5 U	5 U
Benzene	1	1 U	1 U	1 U	14 J	71 J	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	5	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
Bromoform	50*	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	5	1 UJ	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
Carbon Disulfide		1.8	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	5	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	5	1 U	1 U	1 U	23	100 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	5	1 UJ	1 UJ	1 U	20 U	100 U	1 UJ	1 UJ	1 U	1 U	1 U
Chloroform	7	4.2	1.2 J	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
Chloromethane		1 UJ	1 U	1 U	20 U	100 U	1 UJ	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	5	1 U	1 U	1 U	25	86 J	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	0.4**	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane		1 U	1 U	1 U	13 J	100 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	50	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	5	1 U	1 UJ	1 U	20 U	100 U	1 U	1 UJ	1 U	1 U	1 U
Ethyl Benzene	5	1 U	1 U	1 U	310	650	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	5	1 U	1 U	1 U	170	100 U	1 U	1 U	1 U	1 U	1 U
m/p-Xylenes	5	2 U	2 U	2 U	830	1700	2 U	2 U	2 U	2 U	2 U
Methyl Acetate		1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-butyl Ether	10	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
Methylcyclohexane		1 U	1 U	1 U	33	100 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride	5	1 U	1 U	1 U	20 U	100 U	1 U	1.9	2.7	1.5	1.4
o-Xylene	5	1 U	1 U	1 U	280	550	1 U	1 U	1 U	1 U	1 U
Styrene	5	1 U	1 U	1 U	17 J	100	1 U	1 U	1 U	1 U	1 U
t-1,3-Dichloropropene	0.4**	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	1 U	1 U	1 UJ	20 U	100 U	1 U	1 U	1 U	1 U	1 U
Toluene	5	2	1.1 J	1 U	300	4000	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	5	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane	5	1 U	1 U	1 U	20 U	100 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	2	1 U	1 U	1.2 J	20 U	100 U	1 U	1 U	1 U	1 U	1 U

NOTES:

- J: Estimated value.
 U: Not detected. Reporting limit shown.
 B: The analyte was detected in an associated blank.
 D: Diluted sample.
 E: Concentration exceeds calibrated range of the instrument.
 **: Applies to the sum of these substances.

GROUNDWATER VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS

TENTATIVELY IDENTIFIED COMPOUNDS

FRIEDRICHSON COOPERAGE SITE (#5-46-045)

WATERFORD, NEW YORK

VALIDATED DATA

Sample ID	FC-MW-6S	FC-MW-6	FC-MW-8	FC-MW-10	MW-12	MW-13	FC-PZ-TOP
Sampling Date	10/7/2009	10/7/2009	10/7/2009	10/8/2009	9/30/2009	9/30/2009	10/7/2009
Media	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution	1	1	1	100	1	1	20
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Volatiles Organic Compounds (VOCs)							
Tentatively Identified Compounds (TICs)							
1,2,4,5-Tetramethylbenzene							520 J
1,2,4-Trimethylbenzene	8.6 J			560 J			480 J
1,3,5-Trimethylbenzene	6 J			190 J			180 J
1-Hexanol, 2-ethyl-	25 J			1,700 J			
2-Octanone	18 J						
Benzene, (1-methyl-1-propenyl)							1,300 J
Benzene, 1,2,3,5-tetramethyl-							1,100 J
Benzene, 1-chloro-4-(1,1-dimethyle							1,200 J
Benzene, 1-ethyl-2,4-dimethyl-							1,100 J
Benzene, 1-ethyl-3-methyl				550 J			
Benzene, 2-ethenyl-1,4-dimethyl							740 J
Carbon Dioxide				31,000 J			
Dimethyl sulfide	14 J						
Naphthalene				360 J			
Naphthalene, 1,2,3,4-tetrahydro-5-							1,100 J
Naphthalene, 1-methyl-							2,400 J
Naphthalene, 1,6-dimethyl-							1,100 J
Naphthalene, 1,8-dimethyl-							1,300 J
n-Butylbenzene							160 J
n-propylbenzene	0.7 J			120 J			300 J
p-ethyltoluene	7.5 J						380 J
p-Isopropyltoluene							56 J
sec-Butylbenzene							140 J
Silanol, trimethyl-	110 J	47 J		5,800 J	5 J	44 J	1,000 J
Tert butyl alcohol	110 J	54 J	77 J	9,900 J	8 J	41 J	1,100 J
tert-Butylbenzene							14 J
tert-Butyldimethylsilanol			230 J				
Trimethylsilyl fluoride	27 J						
Undecane				1,000 J			

NOTES:

J: Estimated value.

GROUNDWATER SEMI-VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS

FRIEDRICHSON COOPERAGE SITE (#5-46-045)

WATERFORD, NEW YORK

VALIDATED DATA

Sample ID	NYSDEC Class GA	FC-MW-1S 10/6/2009	FC-MW-1 10/5/2009	FC-MW-2 10/6/2009	FC-MW-2S 10/6/2009	FC-MW-3 10/6/2009	FC-MW-4 10/7/2009	FC-MW-5S 10/6/2009	FC-MW-5 10/6/2009
Sampling Date	Standard or	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Media	Guidance Value	1	1	1	1	1	1	1	1
Dilution	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Units									
Semi-volatile Organic Compounds (SVOCs)									
1,1-Biphenyl	5	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
2,2-oxybis(1-Chloropropane)		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
2,4,5-Trichlorophenol	1	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
2,4,6-Trichlorophenol	1	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
2,4-Dichlorophenol	5	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
2,4-Dimethylphenol	50*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
2,4-Dinitrophenol	10*	11 U	11 U	11 U	10 U	10 U	11 UJ	11 U	11 U
2,4-Dinitrotoluene	5	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
2,6-Dinitrotoluene	5	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
2-Chloronaphthalene	10*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
2-Chlorophenol		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
2-Methylnaphthalene		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
2-Methylphenol		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
2-Nitroaniline	5	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
2-Nitrophenol		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
3,3-Dichlorobenzidine	5	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
3+4-Methylphenols		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
3-Nitroaniline	5	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
4,6-Dinitro-2-methylphenol		11 U	11 U	11 U	10 U	10 U	11 UJ	11 U	11 U
4-Bromophenyl-phenylether		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
4-Chloro-3-methylphenol		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
4-Chloroaniline	5	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
4-Chlorophenyl-phenylether		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
4-Nitroaniline	5	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
4-Nitrophenol		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Acenaphthene		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Acenaphthylene		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Acetophenone		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Anthracene	50*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Atrazine		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Benzaldehyde		11 U	11 UJ	11 U	10 U	10 UJ	11 U	11 U	11 U
Benzo(a)anthracene	0.002*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Benzo(a)pyrene	ND	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Benzo(b)fluoranthene	0.002*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Benzo(g,h,i)perylene		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Benzo(k)fluoranthene	0.002*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
bis(2-Chloroethoxy)methane	5	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
bis(2-Chloroethyl)ether	1	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
bis(2-Ethylhexyl)phthalate	5	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Butylbenzylphthalate	50*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Caprolactam		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Carbazole		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Chrysene	0.002*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Dibenz(a,h)anthracene		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Dibenzofuran		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Diethylphthalate	50*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Dimethylphthalate	50*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Di-n-butylphthalate	50	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Di-n-octyl phthalate	50*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Fluoranthene	50*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Fluorene	50*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Hexachlorobenzene	0.04	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Hexachlorobutadiene	0.5	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Hexachlorocyclopentadiene	5	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Hexachloroethane	5	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Indeno(1,2,3-cd)pyrene	0.002*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Isophorone	50*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Naphthalene	10*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Nitrobenzene	0.4	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
N-Nitroso-di-n-propylamine		11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
N-Nitrosodiphenylamine	50*	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Pentachlorophenol	1	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Phenanthrene	50	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Phenol	1	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U
Pyrene	50	11 U	11 U	11 U	10 U	10 U	11 U	11 U	11 U

NOTES:

J: Estimated value.

U: Not detected. Reporting limit shown.

*: NYSDEC Guidance value

D: Diluted sample.

E: Concentration exceeds calibrated range of the instrument.

R: Data rejected by validator.

Highlighted results exceed the NYS Class GA Standard.

GROUNDWATER SEMI-VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS

FRIEDRICHSON COOPERAGE SITE (#5-46-045)

WATERFORD, NEW YORK

VALIDATED DATA

Sample ID Sampling Date Media Dilution Units	NYSDEC Class GA Standard or Guidance Value ug/L	FC-MW-6S 10/7/2009 WATER 10 ug/L	FC-MW-6SDL 10/7/2009 WATER 50 ug/L	FC-MW-6 10/7/2009 WATER 1 ug/L	FC-MW-6DL 10/7/2009 WATER 10 ug/L	FC-MW-7 10/7/2009 WATER 1 ug/L	Dupe of MW-7 10/7/2009 WATER 1 ug/L	FC-MW-8 10/7/2009 WATER 1 ug/L	FC-MW-9 10/8/2009 WATER 1 ug/L
Semi-volatile Organic Compounds (SVOCs)									
1,1-Biphenyl	5	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
2,2-oxybis(1-Chloropropane)		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
2,4,5-Trichlorophenol	1	100 U	520 UD	3 J	110 UD	10 U	11 U	11 U	11 R
2,4,6-Trichlorophenol	1	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
2,4-Dichlorophenol	5	100 U	520 UD	2 J	110 UD	10 U	11 U	11 U	11 R
2,4-Dimethylphenol	50*	580	470 JD	190 E	240 D	10 U	11 U	11 U	11 R
2,4-Dinitrophenol	10*	100 UJ	520 UD	11 UJ	110 UDJ	10 UJ	11 UJ	11 UJ	11 R
2,4-Dinitrotoluene	5	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
2,6-Dinitrotoluene	5	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
2-Chloronaphthalene	10*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
2-Chlorophenol		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
2-Methylnaphthalene		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
2-Methylphenol		420	340 JD	160 E	220 D	10 U	11 U	11 U	11 R
2-Nitroaniline	5	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
2-Nitrophenol		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
3,3-Dichlorobenzidine	5	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
3+4-Methylphenols		1,300 E	1,200 D	420 E	640 D	10 U	11 U	11 U	11 R
3-Nitroaniline	5	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
4,6-Dinitro-2-methylphenol		100 UJ	520 UD	11 UJ	110 UD	10 UJ	11 UJ	11 UJ	11 R
4-Bromophenyl-phenylether		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
4-Chloro-3-methylphenol		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
4-Chloroaniline	5	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
4-Chlorophenyl-phenylether		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
4-Nitroaniline	5	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
4-Nitrophenol		100 U	520 UDJ	11 U	110 UDJ	10 U	11 U	11 U	11 R
Acenaphthene		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Acenaphthylene		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Acetophenone		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Anthracene	50*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Atrazine		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Benzaldehyde		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Benzo(a)anthracene	0.002*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Benzo(a)pyrene	ND	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Benzo(b)fluoranthene	0.002*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Benzo(g,h,i)perylene		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Benzo(k)fluoranthene	0.002*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
bis(2-Chloroethoxy)methane	5	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
bis(2-Chloroethyl)ether	1	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
bis(2-Ethylhexyl)phthalate	5	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Butylbenzylphthalate	50*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Caprolactam		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Carbazole		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Chrysene	0.002*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Dibenz(a,h)anthracene		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Dibenzofuran		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Diethylphthalate	50*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Dimethylphthalate	50*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Di-n-butylphthalate	50	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Di-n-octyl phthalate	50*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Fluoranthene	50*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Fluorene	50*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Hexachlorobenzene	0.04	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Hexachlorobutadiene	0.5	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Hexachlorocyclopentadiene	5	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Hexachloroethane	5	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Indeno(1,2,3-cd)pyrene	0.002*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Isophorone	50*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Naphthalene	10*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Nitrobenzene	0.4	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
N-Nitroso-di-n-propylamine		100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
N-Nitrosodiphenylamine	50*	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Pentachlorophenol	1	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Phenanthrene	50	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R
Phenol	1	1,200 E	1,100 D	440 E	680 D	10 U	11 U	11 U	11 R
Pyrene	50	100 U	520 UD	11 U	110 UD	10 U	11 U	11 U	11 R

NOTES:

J: Estimated value.

U: Not detected. Reporting limit shown.

*: NYSDEC Guidance value

D: Diluted sample.

E: Concentration exceeds calibrated range of the instrument.

R: Data rejected by validator.

Highlighted results exceed the NYS Class GA Standard.

GROUNDWATER SEMI-VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS

FRIEDRICHSON COOPERAGE SITE (#5-46-045)

WATERFORD, NEW YORK

VALIDATED DATA

Sample ID	NYSDEC Class GA	FC-MW-9RE	FC-MW-10	FC-MW-10DL	FC-MW-10DL2	FC-MW-11S	FC-MW-11	MW-12	MW-13
Sampling Date	Standard or	10/8/2009	10/8/2009	10/8/2009	10/8/2009	10/6/2009	10/5/2009	9/30/2009	9/30/2009
Media	Guidance Value	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution	ug/L	1	10	50	250	1	1	1	1
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Semi-volatile Organic Compounds (SVOCs)									
1,1-Biphenyl	5	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
2,2-oxybis(1-Chloropropane)		11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
2,4,5-Trichlorophenol	1	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
2,4,6-Trichlorophenol	1	11 UJ	100 J	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
2,4-Dichlorophenol	5	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
2,4-Dimethylphenol	50*	11 UJ	11,000 E	11,000 D	8,100 JD	11 U	11 U	11 U	11 U
2,4-Dinitrophenol	10*	11 UJ	1,000 UJ	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
2,4-Dinitrotoluene	5	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
2,6-Dinitrotoluene	5	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
2-Chloronaphthalene	10*	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
2-Chlorophenol		11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
2-Methylnaphthalene		11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
2-Methylphenol		11 UJ	8,400 E	8,700 D	6,600 JD	11 U	11 U	11 U	11 U
2-Nitroaniline	5	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
2-Nitrophenol		11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
3,3-Dichlorobenzidine	5	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
3+4-Methylphenols		11 UJ	33,000 E	41,000 ED	33,000 D	11 U	11 U	11 U	11 U
3-Nitroaniline	5	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
4,6-Dinitro-2-methylphenol		11 UJ	1,000 UJ	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
4-Bromophenyl-phenylether		11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
4-Chloro-3-methylphenol		11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
4-Chloroaniline	5	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
4-Chlorophenyl-phenylether		11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
4-Nitroaniline	5	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
4-Nitrophenol		11 UJ	1,000 U	5,000 UDJ	25,000 UDJ	11 U	11 U	11 U	11 U
Acenaphthene		11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Acenaphthylene		11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Acetophenone		11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Anthracene	50*	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Atrazine		11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Benzaldehyde		11 UJ	1,000 U	5,000 UD	25,000 UD	11 UJ	11 UJ	11 U	11 U
Benzo(a)anthracene	0.002*	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Benzo(a)pyrene	ND	11 U	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Benzo(b)fluoranthene	0.002*	11 U	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Benzo(g,h,i)perylene		11 U	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Benzo(k)fluoranthene	0.002*	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
bis(2-Chloroethoxy)methane	5	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
bis(2-Chloroethyl)ether	1	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
bis(2-Ethylhexyl)phthalate	5	11 UJ	110 J	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Butylbenzylphthalate	50*	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Caprolactam		11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Carbazole		11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Chrysene	0.002*	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Dibenz(a,h)anthracene		11 U	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Dibenzofuran		11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Diethylphthalate	50*	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Dimethylphthalate	50*	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Di-n-butylphthalate	50	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Di-n-octyl phthalate	50*	11 U	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Fluoranthene	50*	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Fluorene	50*	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Hexachlorobenzene	0.04	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Hexachlorobutadiene	0.5	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Hexachlorocyclopentadiene	5	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Hexachloroethane	5	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Indeno(1,2,3-cd)pyrene	0.002*	11 U	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Isophorone	50*	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Naphthalene	10*	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Nitrobenzene	0.4	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
N-Nitroso-di-n-propylamine		11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
N-Nitrosodiphenylamine	50*	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Pentachlorophenol	1	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Phenanthrene	50	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U
Phenol	1	11 UJ	55,000 E	90,000 ED	80,000 D	11 U	11 U	11 U	11 U
Pyrene	50	11 UJ	1,000 U	5,000 UD	25,000 UD	11 U	11 U	11 U	11 U

NOTES:

J: Estimated value.

U: Not detected. Reporting limit shown.

*: NYSDEC Guidance value

D: Diluted sample.

E: Concentration exceeds calibrated range of the instrument.

R: Data rejected by validator.

Highlighted results exceed the NYS Class GA Standard.

GROUNDWATER SEMI-VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS
 FRIEDRICHSON COOPERAGE SITE (#5-46-045)
 WATERFORD, NEW YORK

VALIDATED DATA

Sample ID Sampling Date Media Dilution Units	NYSDEC Class GA Standard or Guidance Value ug/L	FC-PZ-TOP 10/7/2009 WATER 20 ug/L	FC-PZ-BOT 10/7/2009 WATER 10 ug/L	FC-PZ-BOTDL 10/7/2009 WATER 50 ug/L	FC-PZ-BOTDL2 10/7/2009 WATER 100 ug/L	FC-GW-35 10/7/2009 WATER 1 ug/L
Semi-volatile Organic Compounds (SVOCs)						
1,1-Biphenyl	5	5,000 J	240 J	5,000 UD	10,000 UD	11 U
2,2-oxybis(1-Chloropropane)		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
2,4,5-Trichlorophenol	1	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
2,4,6-Trichlorophenol	1	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
2,4-Dichlorophenol	5	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
2,4-Dimethylphenol	50*	20,000 U	8,600 E	7,400 D	7,700 JD	11 U
2,4-Dinitrophenol	10*	20,000 UJ	1,000 UJ	5,000 UDJ	10,000 UD	11 UJ
2,4-Dinitrotoluene	5	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
2,6-Dinitrotoluene	5	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
2-Chloronaphthalene	10*	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
2-Chlorophenol		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
2-Methylnaphthalene		96,000	2,600	2,500 JD	2,600 JD	11 U
2-Methylphenol		20,000 U	4,800	4,200 JD	4,500 JD	11 U
2-Nitroaniline	5	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
2-Nitrophenol		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
3,3-Dichlorobenzidine	5	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
3+4-Methylphenols		20,000 U	20,000 E	20,000 D	22,000 D	11 U
3-Nitroaniline	5	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
4,6-Dinitro-2-methylphenol		20,000 UJ	1,000 UJ	5,000 UD	10,000 UD	11 UJ
4-Bromophenyl-phenylether		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
4-Chloro-3-methylphenol		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
4-Chloroaniline	5	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
4-Chlorophenyl-phenylether		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
4-Nitroaniline	5	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
4-Nitrophenol		20,000 U	1,000 U	5,000 UDJ	10,000 UDJ	11 U
Acenaphthene		21,000	500 J	5,000 UD	10,000 UD	11 U
Acenaphthylene		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Acetophenone		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Anthracene	50*	10,000 J	250 J	5,000 UD	10,000 UD	11 U
Atrazine		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Benzaldehyde		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Benzo(a)anthracene	0.002*	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Benzo(a)pyrene	ND	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Benzo(b)fluoranthene	0.002*	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Benzo(g,h,i)perylene		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Benzo(k)fluoranthene	0.002*	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
bis(2-Chloroethoxy)methane	5	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
bis(2-Chloroethyl)ether	1	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
bis(2-Ethylhexyl)phthalate	5	20,000 U	160 J	5,000 UD	10,000 UD	11 U
Butylbenzylphthalate	50*	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Caprolactam		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Carbazole		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Chrysene	0.002*	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Dibenz(a,h)anthracene		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Dibenzofuran		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Diethylphthalate	50*	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Dimethylphthalate	50*	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Di-n-butylphthalate	50	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Di-n-octyl phthalate	50*	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Fluoranthene	50*	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Fluorene	50*	41,000	1,100	880 JD	10,000 UD	11 U
Hexachlorobenzene	0.04	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Hexachlorobutadiene	0.5	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Hexachlorocyclopentadiene	5	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Hexachloroethane	5	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Indeno(1,2,3-cd)pyrene	0.002*	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Isophorone	50*	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Naphthalene	10*	20,000 U	670 J	1,100 JD	1,200 JD	11 U
Nitrobenzene	0.4	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
N-Nitroso-di-n-propylamine		20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
N-Nitrosodiphenylamine	50*	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Pentachlorophenol	1	20,000 U	1,000 U	5,000 UD	10,000 UD	11 U
Phenanthrene	50	79,000	1,900	1,700 JD	1,900 JD	11 U
Phenol	1	5,600 J	34,000 E	42,000 ED	46,000 D	11 U
Pyrene	50	4,600 J	120 J	5,000 UD	10,000 UD	11 U

NOTES:

J: Estimated value.
 U: Not detected. Reporting limit shown.
 *: NYSDEC Guidance value
 D: Diluted sample.
 E: Concentration exceeds calibrated range of the instrument.
 R: Data rejected by validator.
 Highlighted results exceed the NYS Class GA Standard.

GROUNDWATER SEMI-VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS

TENTATIVELY IDENTIFIED COMPOUNDS

FRIEDRICHSONN COOPERAGE SITE (#5-46-045)

WATERFORD, NEW YORK

VALIDATED DATA

Sample ID	FC-MW-1	FC-MW-2	FC-MW-2S	FC-MW-3	FC-MW-4	FC-MW-5S	FC-MW-5	FC-MW-6S	FC-MW-6	FC-MW-7
Sampling Date	10/5/2009	10/6/2009	10/6/2009	10/6/2009	10/7/2009	10/6/2009	10/6/2009	10/7/2009	10/7/2009	10/7/2009
Media	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution	1	1	1	1	1	1	1	10	1	1
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Semi-volatile Organic Compounds (SVOCs)										
Tentatively Identified Compounds (TICs)										
1,1-Biphenyl, 2,3,3-trichloro-										
1,1-Biphenyl, 2,3-dichloro-										
1,1-Biphenyl, 2,4,5-trichloro-										
1,1-Biphenyl, 3,3,4,4-tetrachloro-										
1,1-Biphenyl,2,3,4-trichloro-										
1,1-Biphenyl,2,4,4-trichloro-										
1,3,5-Cycloheptatriene								490 J	46 J	
1,3-Cyclopentadiene, 5-(1-methylet								100 J		
1-Hexanol, 2-ethyl-								34 J		
2-Pentanone, 4-hydroxy-4-methyl-	5.7 R	7.1 R	7.1 R	6.5 R	9.2 R	6.9 R	6.3 R			8.6 R
3-methyl-4-(methoxycarbonyl)hexa-2										
3-Penten-2-one, 4-methyl-	14 JN									
9H-Fluorene, 2-methyl-										
Anthracene, 9-methyl-										
Benzaldehyde, 4-ethyl-									11 J	
Benzene, 1,3-dimethyl-								100 J		
Benzene, 1-ethyl-4-methoxy-									27 J	
Benzene, chloro-						43 JN				
Benzoic acid, 4-chloro-									10 J	
Butanamide, 3,3-dimethyl-										
Butanoic acid									10 J	
Cyclic octaatomic sulfur		4.0 JN						3.8 JN		
Cyclohexane, decyl-										
Cyclopentene, 1,2-dimethyl-4-methyl										
Diphenyl ether						4.2 JN				
Dodecane, 4-methyl-										
Heptadecane, 2,6-dimethyl										
Hexadecane										
Hexadecane, 2,6,10,14-tetramethyl-										
Hexanoic acid, 2-ethyl									67 J	
Naphthalene, 1,2,3,4-tetrahydro-1										
Naphthalene, 1,3-dimethyl-										
Naphthalene, 1,4,6-trimethyl-										
Naphthalene, 1,6,7-trimethyl-										
Naphthalene, 1-methyl-										
Naphthalene, 2-(1-methylthyl)-										
Naphthalene, 2,3-dimethyl-										
Naphthalene, 2,7-dimethyl-										
Naphthalene, 2-ethyl-										
Naphthalene, 1-methyl-7-(1-methyl										
Naphthalene, 2,6-dimethyl-										
Octane, 2,6-dimethyl-										
Pentadecane, 2,6,10-treimethyl-										
Phenanthrene, 2-methyl-										
Phenol 4,4-(1-methylethylidene)b						2.3 JN				
Phenol, 2-(1-methylethyl)-								200 J		
Phenol, 2-(1-methylpropyl)-									20 J	
Phenol, 2-(1-methylpropyl)-, methyl								56 J		
Phenol, 2,3-dimethyl-								100 J		
Phenol, 2,5-dimethyl								160 J		
Phenol, 2,6-dimethyl-									36 J	
Phenol, 2-ethyl-								140 J	67 J	
Phenol, 2-ethyl-4-methyl-								58 J	9.3 J	
Phenol, 2-propyl-									79 J	
Phenol, 3-(1-methylethyl)-								65 J		
Phenol, 3,4,5-trimethyl-								31 J	35 J	
Phenol, 3-ethyl-								710 J	290 J	
Phenol, 3-ethyl-5-methyl-									16 J	
Phenol, 4-(1,1,3,3-tetramethylbutyl						16 JN		150 J		
Phenol, 4-(1-methylethyl)-									30 J	
Phenol, 4,4-(1-methylethylidene) b								42 J	17 J	
Phenol, 4-ethyl-3-methyl-								55 J		
Phenol, p-tert-butyl-						9.8 JN		110 J	54 J	
Phosphonic acid, ethyl- diethyl e										
Tetradecane										
Tridecane, 7-methyl-										

NOTES:

J: Estimated value.

GROUNDWATER SEMI-VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS

TENTATIVELY IDENTIFIED COMPOUNDS

FRIEDRICHSON COOPERAGE SITE (#5-46-045)

WATERFORD, NEW YORK

VALIDATED DATA

Sample ID	FC-MW-1	FC-MW-2	FC-MW-2S	FC-MW-3	FC-MW-4	FC-MW-5S	FC-MW-5	FC-MW-6S	FC-MW-6	FC-MW-7
Sampling Date	10/5/2009	10/6/2009	10/6/2009	10/6/2009	10/7/2009	10/6/2009	10/6/2009	10/7/2009	10/7/2009	10/7/2009
Media	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution	1	1	1	1	1	1	1	10	1	1
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Semi-volatile Organic Compounds (SVOCs)										
Tentatively Identified Compounds (TICs)										
Unknown 11.46								25 J		
Unknown 11.73								25 J		
Unknown 12.85		2.5 J		2.7 J						
Unknown 13.45										
Unknown 14.72										
Unknown 14.89						2.2 J				
Unknown 14.90	2.1 J									
Unknown 2.58										
Unknown 2.74										
Unknown 3.27									26 J	
Unknown 5.44										
Unknown 6.34									12 J	
Unknown 6.67									25 J	
Unknown 7.35								100 J		
Unknown 8.00										
Unknown 9.08										

NOTES:

J: Estimated value.

GROUNDWATER SEMI-VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS

TENTATIVELY IDENTIFIED COMPOUNDS

FRIEDRICHSONN COOPERAGE SITE (#5-46-045)

WATERFORD, NEW YORK

VALIDATED DATA

Sample ID	Dupe of MW-7	FC-MW-8	FC-MW-11S	FC-MW-11	MW-12	MW-13	FC-PZ-TOP	FC-PZ-BOT	FC-GW-35
Sampling Date	10/7/2009	10/7/2009	10/6/2009	10/5/2009	9/30/2009	9/30/2009	10/7/2009	10/7/2009	10/7/2009
Media	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution	1	1	1	1	1	1	20	10	1
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Semi-volatile Organic Compounds (SVOCs)									
Tentatively Identified Compounds (TICs)									
1,1-Biphenyl, 2,3,3-trichloro-							90,000 J		
1,1-Biphenyl, 2,3-dichloro-							60,000 J		
1,1-Biphenyl, 2,4,5-trichloro-								2,100 J	
1,1-Biphenyl, 3,3,4,4-tetrachloro-							47,000 J		
1,1-Biphenyl,2,3,4-trichloro-								3,200 J	
1,1-Biphenyl,2,4,4-trichloro-							97,000 J		
1,3,5-Cycloheptatriene									
1,3-Cyclopentadiene, 5-(1-methylet									
1-Hexanol, 2-ethyl-									
2-Pentanone, 4-hydroxy-4-methyl-	8.1 R	7.5 J	6.2 R	7.7 R	6.7 R	7.1 R			7.7 R
3-methyl-4-(methyoxycarbonyl)hexa-2							72,000 J		
3-Penten-2-one, 4-methyl-									
9H-Fluorene, 2-methyl-							84,000 J	2,200 J	
Anthracene, 9-methyl-							69,000 J		
Benzaldehyde, 4-ethyl-									
Benzene, 1,3-dimethyl-									
Benzene, 1-ethyl-4-methyloxy-									
Benzene, chloro-									
Benzoic acid, 4-chloro-									
Butanamide, 3,3-dimethyl-		3.7 J							
Butanoic acid									
Cyclic octatomic sulfur				35.0 JN					
Cyclohexane, decyl-							92,000 J		
Cyclopentene, 1,2-dimethyl-4-methyl							48,000 J		
Diphenyl ether									
Dodecane, 4-methyl-							48,000 J		
Heptadecane, 2,6-dimethyl							210,000 J	6,300 J	
Hexadecane								4,400 J	
Hexadecane, 2,6,10,14-tetramethyl-							140,000 J	4,400 J	
Hexanoic acid, 2-ethyl									
Naphthalene, 1,2,3,4-tetrahydro-1								3,000 J	
Naphthalene, 1,3-dimethyl-								2,700 J	
Naphthalene, 1,4,6-trimethyl-								2,200 J	
Naphthalene, 1,6,7-trimethyl-								2,100 J	
Naphthalene, 1-methyl-								2,800 J	
Naphthalene, 2-(1-methylthyl)-								3,400 J	
Naphthalene, 2,3-dimethyl-							52,000 J	4,800 J	
Naphthalene, 2,7-dimethyl-							57,000 J	5,000 J	
Naphthalene, 2-ethyl-								2,400 J	
Naphthalene, 1-methyl-7-(1-methyl							64,000 J		
Naphthalene, 2,6-dimethyl-								3,200 J	
Octane, 2,6-dimethyl-							59,000 J		
Pentadecane, 2,6,10-treimethyl-							50,000 J	5,700 J	
Phenanthrene, 2-methyl-							80,000 J		
Phenol 4,4-(1-methylethylidene)b									
Phenol, 2-(1-methylethyl)-									
Phenol, 2-(1-methylpropyl)-									
Phenol, 2-(1-methylpropyl)-, methyl									
Phenol, 2,3-dimethyl-									
Phenol, 2,5-dimethyl									
Phenol, 2,6-dimethyl-									
Phenol, 2-ethyl-								3,200 J	
Phenol, 2-ethyl-4-methyl-									
Phenol, 2-propyl-									
Phenol, 3-(1-methylethyl)-									
Phenol, 3,4,5-trimethyl-									
Phenol, 3-ethyl-									
Phenol, 3-ethyl-5-methyl-									
Phenol, 4-(1,1,3,3-tetramethylbutyl		7.1 J							
Phenol, 4-(1-methylethyl)-									
Phenol, 4,4-(1-methylethylidene) b									
Phenol, 4-ethyl-3-methyl-									
Phenol, p-tert-butyl-									
Phosphonic acid, ethyl- diethyl e		3.5 J							
Tetradecane							55,000 J		
Tridecane, 7-methyl-								2,600 J	

NOTES:

J: Estimated value.

GROUNDWATER SEMI-VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS

TENTATIVELY IDENTIFIED COMPOUNDS

FRIEDRICHSONN COOPERAGE SITE (#5-46-045)

WATERFORD, NEW YORK

VALIDATED DATA

Sample ID	Dupe of MW-7	FC-MW-8	FC-MW-11S	FC-MW-11	MW-12	MW-13	FC-PZ-TOP	FC-PZ-BOT	FC-GW-35
Sampling Date	10/7/2009	10/7/2009	10/6/2009	10/5/2009	9/30/2009	9/30/2009	10/7/2009	10/7/2009	10/7/2009
Media	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution	1	1	1	1	1	1	20	10	1
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Semi-volatile Organic Compounds (SVOCs)									
Tentatively Identified Compounds (TICs)									
Unknown 11.46									
Unknown 11.73									
Unknown 12.85				2.2 J					
Unknown 13.45		4.6 J							
Unknown 14.72						2.7 J			
Unknown 14.89									
Unknown 14.90									
Unknown 2.58		2.9 J							
Unknown 2.74		2.6 J							
Unknown 3.27									
Unknown 5.44							52,000 J		
Unknown 6.34									
Unknown 6.67									
Unknown 7.35									
Unknown 8.00								2,200 J	
Unknown 9.08		3.0 J							

NOTES:

J: Estimated value.

GROUNDWATER METALS ANALYTICAL RESULTS
 FRIEDRICHSON COOPERAGE SITE (#5-46-045)
 WATERFORD, NEW YORK
 VALIDATED DATA

Sample ID	NYSDEC Class GA	FC-MW-1S	FC-MW-1	FC-MW-2	FC-MW-2S	FC-MW-3	FC-MW-4	FC-MW-5S	FC-MW-5	FC-MW-6S	FC-MW-6	FC-MW-7	Dupe of MW-7
Sampling Date		10/6/2009	10/5/2009	10/6/2009	10/6/2009	10/6/2009	10/7/2009	10/6/2009	10/6/2009	10/7/2009	10/7/2009	10/7/2009	10/7/2009
Media	Standard or	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution	Guidance Value	1	1	1	1	1	1	1	1	1	1	1	1
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
TAL Metals													
Aluminum		1520	373	21.8 J	29 J	46.9 J	22 J	22.8 J	29.2 J	522	81.7	23.7 J	23.5 J
Antimony	3	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Arsenic	25	10 U	10 U	10 U	10 U	10 U	10 U	7.34 J	10 U	6.15 J	10 U	10 U	10 U
Barium	1,000	159	179	253	80.8	346	149	182	6.08 J	58.8	414	57.6	57.4
Beryllium	3	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	0.35 J	3 U	3 U	3 U
Cadmium	5	3 U	3 U	3 U	3 U	3 U	3 U	3 U	0.66 J	3 U	3 U	3 U	3 U
Calcium		51300 J	1450 J	113000 J	60900 J	156000 J	99200	49200 J	10700 J	6540	23800	42600	42100
Chromium	50	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cobalt		15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
Copper	200	3.96 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	44.1	10 U	10 U	10 U
Iron	300**	2760	536	48.5 J	40.4 J	178	2440	5830	772	714	28.5 J	802	772
Lead	25	8.94	5 J	4.81 J	2.5 J	5.52 J	6.56	6.88	6 U	22	4.58 J	2.78 J	2.58 J
Magnesium	35,000*	14400 J	493 J	35600 J	15700 J	46200 J	34100	9320 J	1620 J	1100	494 J	7310	7230
Manganese	300**	186	20.1	642	31.7	2440	1910	3330	42.4	336	5.24 J	5080	5050
Mercury	0.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.11 J	0.2 U	0.2 U	0.2 U
Nickel	100	4.07 J	20 U	20 U	20 U	20 U	20 U	20 U	20 U	24.7	8.68 J	7.87 J	7.22 J
Potassium		3620 J	3210 J	11100 J	6580	7420 J	7810	2220 J	17800 J	1230	8530	3550	3500
Selenium	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5.95 J
Silver	50	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	20,000	144000 J	167000 J	118000 J	212000 J	102000 J	60300	99300 J	3990 J	289000	146000	25400	24900
Thallium	0.5*	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Vanadium		20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	19 J	20 U	20 U	20 U
Zinc	2,000*	41.3	27.1	35.6	22.6	32.4	19.6 J	41	49.7	28.4	28.2	25.2	24.2
Cyanide		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.019	0.01 U	0.01 U

NOTES:

J: Estimated value.

U: Not detected. Reporting limit shown.

*: NYSDEC Guidance value.

** Applies to the sum of these substances.

Highlighted results exceed the NYSDEC Class GA Standard.

GROUNDWATER METALS ANALYTICAL RESULTS
 FRIEDRICHSON COOPERAGE SITE (#5-46-045)
 WATERFORD, NEW YORK
 VALIDATED DATA

Sample ID	NYSDEC Class GA	FC-MW-8	FC-MW-9	FC-MW-10	FC-MW-11S	FC-MW-11	MW-12	MW-13	FC-PZ-TOP	FC-PZ-BOT	FC-GW-35
Sampling Date		10/7/2009	10/8/2009	10/8/2009	10/6/2009	10/5/2009	9/30/2009	9/30/2009	10/7/2009	10/7/2009	10/7/2009
Media	Standard or	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution	Guidance Value	1	1	1	1	1	1	1	1	1	1
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
TAL Metals											
Aluminum		123	159	2790	28.9 J	204	163 J	110 J	1430	1660	14.4 J
Antimony	3	25 U	6 J	14 J	25 U	25 U	25 U	25 U	10 J	8 J	25 U
Arsenic	25	10 U	10 U	168	10 U	10 U	10 U	10 U	69.5	63.3	10 U
Barium	1,000	67.3	1860	724	78.6	214	72.8	218	302	293	55.6
Beryllium	3	3 U	3 U	7.82	3 U	3 U	3 UJ	3 UJ	2.48 J	2.55 J	3 U
Cadmium	5	3 U	3 U	3.13	3 U	3 U	3 U	3 U	0.85 J	0.85 J	3 U
Calcium		35000	18300	17600	74700 J	1430 J	34300	47100	23700	24400	31800
Chromium	50	2.01 J	5 U	197	5 U	5 U	5 U	5 U	93.3	88.8	5 U
Cobalt		15 U	15 U	37.7	15 U	15 U	15 U	15 U	7.14 J	7.33 J	15 U
Copper	200	10 U	10 U	138	10 U	10 U	10 U	10 U	47	43.8	10 U
Iron	300**	2030	296	9920	30.7 J	279	1850	508	5070	5370	34.9 J
Lead	25	8.42	5.33 J	321	3.22 J	3.07 J	3.05 J	6.18 J	139	130	6 U
Magnesium	35,000*	6890	5420	361 J	21900 J	269 J	7640 J	17700 J	4990	5230	6230
Manganese	300**	3920	87.2	589	21.4	7.75 J	822	5410	690	721	387
Mercury	0.7	0.2 U	0.2 U	1.03 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 J	0.2 J	0.2 U
Nickel	100	3.78 J	14.2 J	626	20 U	20 U	20 U	5.99 J	159	152	20 U
Potassium		4270	12400	26400	2340 J	6160 J	2390	4480	16600	16700	1440
Selenium	10	10 U	10 U	45.4	10 U	10 U	10 U	10 U	18.3	20.8	10 U
Silver	50	5 U	5 U	1.5 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Sodium	20,000	381000	225000	1000 U	99300 J	271000 J	30800	71400	1490000	1501900 OR	19900
Thallium	0.5*	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Vanadium		20 U	20 U	904	20 U	20 U	20 UJ	20 UJ	341	336	20 U
Zinc	2,000*	27.5	25.8	97.7	32.9	31	20 UJ	5.7 J	69.8	67.2	24.8
Cyanide		0.01 U	0.01 U	0.187	0.01 U	0.01 U	0.01 U	0.01 U	0.063	0.064	0.01 U

NOTES:

J: Estimated value.

U: Not detected. Reporting limit shown.

*: NYSDEC Guidance value.

** Applies to the sum of these substances.

Highlighted results exceed the NYSDEC Class GA Standard

GROUNDWATER PESTICIDES/PCBs ANALYTICAL RESULTS
 FRIEDRICHSON COOPERAGE SITE (#5-46-045)
 WATERFORD, NEW YORK
 VALIDATED DATA

Sample ID	NYSDEC Class GA	FC-MW-1S	FC-MW-1	FC-MW-2S	FC-MW-2	FC-MW-3	FC-MW-4	FC-MW-5S	FC-MW-5	FC-MW-6S	FC-MW-6SDL	FC-MW-6	FC-MW-7	Dupe of MW-7
Sampling Date		10/6/2009	10/5/2009	10/6/2009	10/6/2009	10/6/2009	10/7/2009	10/6/2009	10/6/2009	10/7/2009	10/7/2009	10/7/2009	10/7/2009	10/7/2009
Media	Standard or	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution	Guidance Value	1	1	1	1	1	1	1	1	10	200	1	1	1
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Pesticides														
4,4-DDD	0.3	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U	0.005 UJ	0.005 UJ	0.053 UJ		0.005 U	0.005 UJ	0.005 UJ
4,4-DDE	0.2	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U	0.005 UJ	0.005 UJ	0.053 U		0.005 U	0.005 UJ	0.005 UJ
4,4-DDT	0.2	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U	0.005 UJ	0.005 UJ	0.053 UJ		0.005 U	0.005 UJ	0.005 UJ
Aldrin	ND	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.053 U		0.005 U	0.005 UJ	0.005 UJ
alpha-BHC		0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.053 U		0.005 U	0.005 UJ	0.005 UJ
alpha-Chlordane	0.05	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.053 U		0.005 U	0.005 UJ	0.005 UJ
beta-BHC		0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U	0.005 UJ	0.005 UJ	0.053 U		0.005 U	0.005 UJ	0.005 UJ
delta-BHC		0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.053 UJ		0.005 UJ	0.005 UJ	0.005 UJ
Dieldrin	0.004	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U	0.005 UJ	0.005 UJ	0.053 U		0.005 U	0.005 UJ	0.005 UJ
Endosulfan I		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.053 U		0.005 U	0.005 UJ	0.005 UJ
Endosulfan II		0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U	0.005 UJ	0.005 UJ	0.053 U		0.005 U	0.005 UJ	0.005 UJ
Endosulfan Sulfate		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 U	0.005 UJ	0.053 U		0.005 UJ	0.005 UJ	0.005 UJ
Endrin	ND	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U	0.005 UJ	0.005 UJ	0.053 UJ		0.005 U	0.005 UJ	0.005 UJ
Endrin aldehyde	5	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.053 U		0.005 U	0.005 UJ	0.005 UJ
Endrin ketone	5	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.053 U		0.005 UJ	0.005 UJ	0.005 UJ
gamma-BHC	0.05	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.053 U		0.004 J	0.005 UJ	0.005 UJ
gamma-Chlordane	0.05	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.053 U		0.005 U	0.005 UJ	0.005 UJ
Heptachlor	0.04	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U	0.005 UJ	0.005 UJ	0.053 U		0.005 U	0.005 UJ	0.005 UJ
Heptachlor epoxide	0.03	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U	0.005 UJ	0.005 UJ	0.053 U		0.005 U	0.005 UJ	0.005 UJ
Methoxychlor	35	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.053 UJ		0.005 U	0.005 UJ	0.005 UJ
Toxaphene	0.06	0.053 U	0.051 U	0.054 U	0.052 U	0.052 U	0.053 U	0.054 U	0.053 UJ	0.53 U		0.052 U	0.053 UJ	0.052 UJ
Polychlorinated biphenyls														
Aroclor-1016		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0 U	0.05 UJ	0.05 UJ	11 UD	0.05 U	0.05 U	0.05 U
Aroclor-1221		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0 U	0.05 UJ	0.05 UJ	11 UD	0.05 U	0.05 U	0.05 U
Aroclor-1232		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0 U	0.05 UJ	0.05 UJ	11 UD	0.05 U	0.05 U	0.05 U
Aroclor-1242		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.47	0.05 UJ	17 E	200	0.05 U	0.05 U	0.05 U
Aroclor-1248		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0 U	0.05 UJ	0.05 UJ	11 UD	0.05 U	0.05 U	0.05 U
Aroclor-1254		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0 U	0.05 UJ	0.05 UJ	11 UD	0.05 U	0.05 U	0.05 U
Aroclor-1260		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0 U	0.05 UJ	0.05 UJ	11 UD	0.05 UJ	0.05 UJ	0.05 UJ
Total PCBs	0.09	0	0	0	0	0	0	0.47	0	17	200	0	0	0

NOTES:
 J: Estimated value.
 U: Not detected. Reporting limit shown.
 E: Analyte's concentration exceeds calibrated range of the instrument.
 P: >25% difference for detected concentrations between two GC columns.
 D: Diluted sample.
 Highlighted results exceed the NYSDEC Class GA Standard.

GROUNDWATER PESTICIDES/PCBs ANALYTICAL RESULTS
 FRIEDRICHSON COOPERAGE SITE (#5-46-045)
 WATERFORD, NEW YORK
 VALIDATED DATA

Sample ID	NYSDEC Class GA	FC-MW-8	FC-MW-9	FC-MW-10	FC-MW-10DL	FC-MW-11S	FC-MW-11	MW-12	MW-13	FC-PZ-TOP	FC-PZ-TOPDL	FC-PZ-BOT	FC-PZ-BOTDL	FC-GW-35
Sampling Date		10/7/2009	10/8/2009	10/8/2009	10/8/2009	10/6/2009	10/5/2009	9/30/2009	9/30/2009	10/7/2009	10/7/2009	10/7/2009	10/7/2009	10/7/2009
Media	Standard or	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution	Guidance Value	1	1	200	1000	1	1	1	1	200	10000	200	1000	1
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Pesticides														
4,4-DDD	0.3	0.005 UJ	0.005 U	10 UJ		0.005 UJ	0.005 UJ	0.005 U	0.005 U	100 UJ		10 UJ		0.005 U
4,4-DDE	0.2	0.005 UJ	0.005 U	10 U		0.005 UJ	0.005 UJ	0.005 U	0.005 U	100 U		10 U		0.005 U
4,4-DDT	0.2	0.005 UJ	0.005 UJ	10 UJ		0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	100 UJ		10 UJ		0.005 U
Aldrin	ND	0.005 UJ	0.005 U	10 U		0.005 U	0.005 UJ	0.005 U	0.005 U	100 U		10 U		0.005 U
alpha-BHC		0.005 UJ	0.005 U	10 U		0.005 U	0.005 UJ	0.005 U	0.005 U	100 U		10 U		0.005 U
alpha-Chlordane	0.05	0.005 UJ	0.005 U	10 U		0.005 U	0.005 UJ	0.005 U	0.005 U	100 U		10 U		0.005 U
beta-BHC		0.005 UJ	0.005 UJ	10 U		0.005 UJ	0.005 UJ	0.005 U	0.005 U	100 U		10 U		0.005 U
delta-BHC		0.005 UJ	0.005 U	10 UJ		0.005 UJ	0.005 UJ	0.005 U	0.005 U	100 UJ		10 UJ		0.005 UJ
Dieldrin	0.004	0.005 UJ	0.005 U	10 U		0.005 UJ	0.005 UJ	0.005 U	0.005 U	100 U		10 U		0.005 U
Endosulfan I		0.005 UJ	0.005 U	10 U		0.005 U	0.005 UJ	0.005 U	0.005 U	100 U		10 U		0.005 U
Endosulfan II		0.005 UJ	0.005 U	10 U		0.005 UJ	0.005 UJ	0.005 U	0.005 U	100 U		10 U		0.005 U
Endosulfan Sulfate		0.005 UJ	0.005 U	10 U		0.005 U	0.005 UJ	0.005 U	0.005 U	100 U		10 U		0.005 UJ
Endrin	ND	0.005 UJ	0.005 U	10 UJ		0.005 UJ	0.005 UJ	0.005 U	0.005 U	100 UJ		10 UJ		0.005 U
Endrin aldehyde	5	0.005 UJ	0.005 U	10 U		0.005 U	0.005 UJ	0.005 U	0.005 U	100 U		10 U		0.005 U
Endrin ketone	5	0.005 UJ	0.005 U	10 U		0.005 UJ	0.005 UJ	0.005 U	0.005 U	100 U		10 U		0.005 UJ
gamma-BHC	0.05	0.005 UJ	0.005 U	10 U		0.005 U	0.005 UJ	0.005 U	0.005 U	100 U		10 U		0.005 U
gamma-Chlordane	0.05	0.005 UJ	0.005 U	10 U		0.005 U	0.005 UJ	0.005 U	0.005 U	100 U		10 U		0.005 U
Heptachlor	0.04	0.005 UJ	0.005 U	10 U		0.005 UJ	0.005 UJ	0.005 U	0.005 U	100 U		10 U		0.005 U
Heptachlor epoxide	0.03	0.005 UJ	0.005 U	10 U		0.005 UJ	0.005 UJ	0.005 U	0.005 U	100 U		10 U		0.005 U
Methoxychlor	35	0.005 UJ	0.005 U	10 UJ		0.005 U	0.005 UJ	0.005 U	0.005 U	100 UJ		10 UJ		0.005 U
Toxaphene	0.06	0.053 UJ	0.054 U	100 U		0.053 U	0.053 UJ	0.053 U	0.054 U	1000 U		100 U		0.052 U
Polychlorinated biphenyls														
Aroclor-1016		0.05 UJ	0.05 U	5 U	500 UD	0.05 U	0.05 UJ	0.06 U	0.05 U	10 U	5000 UD	5 U	500 UD	0.05 U
Aroclor-1221		0.05 UJ	0.05 U	5 U	500 UD	0.05 U	0.05 UJ	0.06 U	0.05 U	10 U	5000 UD	5 U	500 UD	0.05 U
Aroclor-1232		0.05 UJ	0.05 U	5 U	500 UD	0.05 U	0.05 UJ	0.06 U	0.05 U	10 U	5000 UD	5 U	500 UD	0.05 U
Aroclor-1242		0.05 UJ	0.05 U	1600 E	2200	0.05 U	0.05 UJ	0.06 U	0.05 U	38000 E	53000	4900 E	7300	0.05 U
Aroclor-1248		0.05 UJ	0.05 U	5 U	500 UD	0.05 U	0.05 UJ	0.06 U	0.05 U	10 U	5000 UD	5 U	500 UD	0.05 U
Aroclor-1254		0.05 UJ	0.05 U	5 U	500 UD	0.05 U	0.05 UJ	0.06 U	0.05 U	10 U	5000 UD	5 U	500 UD	0.05 U
Aroclor-1260		0.05 UJ	0.05 UJ	5 UJ	500 UD	0.05 U	0.05 UJ	0.06 U	0.05 U	10 U	5000 UD	5 UJ	500 UD	0.05 UJ
Total PCBs	0.09	0	0	1600	2200	0	0	0	0	38000	53000	4900	7300	0

NOTES:
 J: Estimated value.
 U: Not detected. Reporting limit shown.
 E: Analyte's concentration exceeds calibrated range of the instrument.
 P: >25% difference for detected concentrations between two GC column
 D: Diluted sample.
 Highlighted results exceed the NYSDEC Class GA Standard.