

November 7, 2014

Mr. Douglas MacNeal
New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Technical Support, 11th Floor
625 Broadway
Albany, New York 12233

RE: Annual Groundwater Monitoring Report - 2014
River Place I & II
West 42nd Street, New York, New York
BCP Site Nos. C231024 and C231012
Langan Project No.: 170040901

Dear Mr. MacNeal:

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) is pleased to present this letter report summarizing groundwater monitoring well sampling activities for River Place I & II located between West 41st and West 42nd Streets and 11th and 12th Avenues in New York, New York (the "Site"). A Site Location Map is attached as Figure 1. A Final Engineering Report (FER) for the Site was approved by the New York State Department of Environmental Conservation (NYSDEC) and a Certificate of Completion (COC) was issued on June 19, 2007. A Site Management Plan (SMP) dated July 2006 was approved by NYSDEC.

In accordance with the SMP, quarterly groundwater monitoring began on March 16, 2009 and was conducted for two years. Following quarterly monitoring, an annual monitoring program was implemented and will continue until groundwater exhibits consistent or declining levels of contamination. This report summarizes the results of the fourth annual sampling event conducted in October 2014.

2014 Annual Groundwater Sampling

On October 14, 2014, Langan sampled groundwater monitoring wells MW-N2 and MW-S2. During sampling, Langan visually inspected the monitoring wells for evidence of tampering or damage, and measured the depth to groundwater. The water level was measured using a Solinst oil/water interface probe. Water level measurements were repeated at least once to verify the accuracy of the initial measurement. All measurements were recorded on Langan field sampling forms. Copies of the completed field forms are included as Attachment A of this report.

Prior to collecting groundwater samples, MW-N2 and MW-S2 were purged using low-flow purge and sample techniques. The wells were purged using clean, dedicated, polyethylene tubing attached to a Waterra positive displacement pump. During purging, groundwater was monitored for dissolved oxygen, pH, oxidation reduction potential (ORP), temperature, turbidity, and specific conductance. These readings are included on the sampling forms in Attachment A. Prior to sampling, the wells were allowed to recover to approximately 90 percent or more of the static water level.

MW-N2 and MW-S2 were purged until physical and chemical parameters stabilized. Approximately 8 and 14 gallons were purged from monitoring wells MW-N2 and MW-S2, respectively. After purging, samples MW-N2_101414 and MW-S2_101414 were collected using a Waterra pump and dedicated tubing.

The groundwater samples, MW-N2_101414 and MW-S2_101414 were collected into laboratory-prepared containers, tightly sealed, uniquely labeled, and then stored on ice for transport to Alpha Analytical (Alpha) in Westborough, Massachusetts, under standard chain-of-custody procedures. The groundwater samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260, semivolatile organic compounds (SVOCs) by EPA Method 8270, Target Analyte List (TAL) metals by EPA SW 6000/7000, cyanide (total) by EPA SW 9012, and cyanide (available) by EPA 9014.

Findings

Observations

- Measurable free product was not observed in either well.
- A sheen was observed on purged water from MW-S2
- The wells were observed to be in good condition.

Groundwater Analytical Results

Analytical results for the 2014 annual monitoring event that exceeded the New York State Department of Environmental Conservation (NYSDEC) Technical and Operations Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) Class GA are summarized below.

MW-N2	MW-S2
VOCs <ul style="list-style-type: none">• 1,2,4-trimethylbenzene• benzene• ethylbenzene• naphthalene• p/m-xylene• o-xylene• toluene	VOCs <ul style="list-style-type: none">• 1,2,4-trimethylbenzene• benzene• ethylbenzene• isopropylbenzene• naphthalene• n-propylbenzene• o-xylene
SVOCs <ul style="list-style-type: none">• acenaphthene• benzo(a)anthracene• benzo(b)fluoranthene• benzo(k)fluoranthene• benzo(a)pyrene• biphenyl• chrysene• ideno(1,2,3-cd)pyrene• naphthalene• phenanthrene• phenol	SVOCs <ul style="list-style-type: none">• acenaphthene• benzo(a)anthracene• benzo(a)pyrene• benzo(b)fluoranthene• benzo(k)fluoranthene• chrysene• indeno(1,2,3-cd)pyrene• naphthalene
MW-N2	MW-S2
Inorganics <ul style="list-style-type: none">• cyanide• iron• magnesium• manganese• sodium	Inorganics <ul style="list-style-type: none">• cyanide• iron• lead• magnesium• manganese• mercury• sodium

Analytical results for the First Quarter 2009 through Fourth Annual 2014 sampling rounds are summarized in Table 1 and the laboratory analytical report for the 2014 annual sampling results is included as Attachment B.

Please contact us if you have any questions.

Sincerely,
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.



Jason Hayes, P.E.
Senior Associate/Vice President

Enclosure(s):

- | | |
|--------------|---|
| Figure 1 | Site Location Map |
| Figure 2 | Well Location Map |
| Table 1 | VOCs, SVOCs, Total Metals and Cyanide Detections in Groundwater Samples |
| Attachment A | Groundwater Sampling Forms |
| Attachment B | Laboratory Analytical Reports, Chain-of-Custody and Certifications |

cc:

Richard Rienzo- Con Edison
William R. Dacunto- River Place II LLC
Jason Hayes – Langan

TABLES

Table 1
VOC, SVOC, Metals and Cyanide Exceedances in Groundwater Samples
River Place II
New York, New York
Langan Project No. 170040901

LOCATION SAMPLING DATE LAB SAMPLE ID		Park Area Northern Well																
		2009				2010				2011				2012		2013		2014
		1st Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	YEAR 1	YEAR 2	YEAR 3	YEAR 4	MW-N_101414			
NYSDEC TOGS 1.1.1 AWQS	MW-N-3-16-09 3/16/2009 L0903143-01	DUP-3-16-09 3/16/2009 L0903143-03	MW-N-6-17-09 6/17/2009 L0908040-01	MW-N-9/18/09 9/18/2009 L0913185-01	MW-N2-1-7-2010 1/7/2010 L1000282-01	MW-N2-3-01-10 3/1/2010 L1003006-01	MW-N2-6-10-10 6/10/2010 L1008735-02	MW-N2-9-8-10 9/8/2010 L1013903-01	MW-N2-12-15-10 12/15/2010 L1020042-01	MW-N2-10-17-11 10/17/2011 L1116955-02	MW-N2-101712 10/17/2012 L1218727-02	MW-N2-100813 10/8/2013 L1320135-02	MW-N2_101414 10/14/2014 L1424443-01					
VOCs (µg/L)																		
1,2,4-Trimethylbenzene	5	1200	U	1200	U	1200	U	1200	U	250	U	500	U	620	U	620	J	
1,3,5-Trimethylbenzene	5	1200	U	1200	U	1200	U	1200	U	250	U	500	U	620	U	620	U	
Benzene	1	19000		19000		17000		15000		2900		610		1100		2100		2400
Ethylbenzene	5	1900		1900		1900		1800		1400		170		410		810		980
Isopropylbenzene	5	250	U	250	U	250	U	250	U	250	U	50	U	100	U	120	U	
Methylene chloride	5	2500	U	2500	U	2500	U	2500	U	2500	U	500	U	1000	U	1200	U	
Naphthalene	10	15000		15000		18000		19000		22000		4200		5400		12000		15000
n-Butylbenzene	5	250	U	250	U	250	U	250	U	250	U	50	U	100	U	120	U	
n-Propylbenzene	5	250	U	250	U	250	U	250	U	250	U	50	U	100	U	120	U	
o-Xylene	5	1400		1300		1400		1200		1000		180		330		590		760
p/m-Xylene	5	3200		3100		3100		2900		2200		330		600		1100		1400
p-Isopropyltoluene	5	250	U	250	U	250	U	250	U	250	U	50	U	100	U	120	U	
Styrene	5	500	U	500	U	500	U	500	U	500	U	100	U	200	U	250	U	
Toluene	5	4200		4000		4400		4100		740		75	U	150	U	290		420
SVOCs (µg/L)																		
2,4-Dimethylphenol	50	1800		1800		830		1200		270		500	U	29	U	160		10
Acenaphthene	20	120		160		95		99		61		65		93		97		170
Benz(a)anthracene	0.002	8.8		39	U	8.2	U	9.6	U	40	U	10	U	9.2		80	U	100
Benz(a)pyrene	0	7.2		39	U	8.2	U	9.6	U	40	U	10	U	8.9		80	U	100
Benz(b)fluoranthene	0.002	8.4		39	U	8.2	U	9.6	U	40	U	10	U	9.2		80	U	100
Benz(k)fluoranthene	0.002	3.9	U	39	U	8.2	U	9.6	U	40	U	10	U	4	U	80	U	100
Biphenyl	5	50		56		26	U	36		72		250	U	30		34		52
Bis(2-Ethylhexyl)phthalate	5	24	U	24	U	26	U	46		25	U	5	U	5	U	5	U	5
Chrysene	0.002	4.1		39	U	8.2	U	9.6	U	40	U	10	U	7.2		80	U	100
Fluorene	50	56		80		59		47		40	U	39	U	60		80	U	58
Indeno[1,2,3-cd]Pyrene	0.002	3.9	U	39	U	8.2	U	9.6	U	40	U	10	U	4	U	80	U	100
Naphthalene	10	12000		14000		8900		9400		2200		2700		4200		6900		9100
Phenanthrene	50	100		150		53		62		40		52		84		80		97
Phenol	1	120		110		61		87		35	U	350	U	17		27		16
Total Metals																		
Arsenic, Total	25	15		17		15		15		11		6		5		11		14
Iron, Total	300	5300		2700		1900		1200		3500		4000		4800		2600		12000
Lead, Total	25	15		10	U	10	U	10	U	10	U	10	U	10	U	67		10
Magnesium, Total	35000	70000		72000		70000		59000		83000		46000		46000		51000		86000
Manganese, Total	300	1570		1430		1570		1340		746		603		632		528		816
Mercury, Total	0.7	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.3	U	0.2
Sodium, Total	20000	300000		320000		270000		250000		240000		110000		160000		200000		240000
General Chemistry																		
Cyanide, Total		200	1100	1090		789		799		890		1780		1500		1060		1680

Qualifiers:

U = The analyte was analyzed for, but was not detected at a level greater than or equal to RL.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

- Groundwater samples were compared to New York State Department of Environmental Conservation (NYSDEC) Technical and Operations Guidance Series (TOGS 1.1.1) Ambient Water Quality Standards (AWQS).
- Only compounds with exceedances are shown in the table.
- NYSDEC TOGS 1.1.1 AWQS exceedances are highlighted and bolded.
- Reporting Limits (RL) above NYSDEC TOGS standards are italicized.
- µg/L = micrograms per liter
- VOCs = Volatile Organic Compounds
- SVOCs = Semivolatile

Table 1
VOC, SVOC, Metals and Cyanide Exceedances in Groundwater Samples
River Place II
New York, New York
Langan Project No. 170040901

		Park Area Southern Well ⁶											
LOCATION	SAMPLING DATE	2009		2010		2011		2012		2013		2014	
		1st Quarter	2nd Quarter	4th Quarter ⁷	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	YEAR 1	YEAR 2	YEAR 3	YEAR 4	
LOCATION	NYSDEC TOGS 1.1.1 AWQS	MW-S-3-16-09 3/16/2009 L0903143-02	MW-S-6-17-09 6/17/2009 L0908040-02	MW-S2-1-7-2010 1/7/2010 L1000282-02	MW-S2-3-01-10 3/1/2010 L1003006-02	MW-S2-6-10-10 6/10/2010 L1008735-01	MW-S2-9-8-10 9/8/2010 L1013903-02	MW-S2-12-15-10 12/15/2010 L1020042-02	MW-S2-10-17-11 10/17/2011 L1116955-01	MW-S2-101712 10/17/2012 L1218727-01	MW-S2-100813 10/8/2013 L1320135-01	MW-S2-101414 10/14/2014 L1424443-02	
VOCs (µg/L)													
1,2,4-Trimethylbenzene	5	76	U	25	U	280		130	U	180		150	
1,3,5-Trimethylbenzene	5	62	U	25	U	61		120	U	120	U	120	U
Benzene	1	140		170		200		75	U	120		110	
Ethylbenzene	5	160		20		710		330		590		460	
Isopropylbenzene	5	35		5.4		64		30		61		44	
Methylene chloride	5	120	U	50	U	420		250	U	250	U	250	U
Naphthalene	10	610		350		4900		1800		1700		1900	
n-Butylbenzene	5	12	U	5	U	6.2		25	U	25	U	25	U
n-Propylbenzene	5	19		5		42		25		37		30	
o-Xylene	5	43		16		320		110		150		70	
p/m-Xylene	5	50		21		410		150		150		82	
p-Isopropyltoluene	5	12	U	5	U	11		25	U	25	U	25	U
Styrene	5	25	U	10	U	40		50	U	50	U	50	U
Toluene	5	19	U	29		180		46		38	U	38	U
SVOCs (µg/L)													
2,4-Dimethylphenol	50	10	U	10	U	10	U	500	U	10	U	10	U
Acenaphthene	20	14	0.2	U	200	U	63		59		41		63
Benz(a)anthracene	0.002	0.2	U	0.2	U	200	U	10	U	4.4	U	10	U
Benz(a)pyrene	0	0.2	U	0.2	U	200	U	15		4.8		17	
Benz(b)fluoranthene	0.002	0.2	U	0.2	U	200	U	14		3.4		10	
Benz(k)fluoranthene	0.002	0.2	U	0.2	U	200	U	10	U	2	U	10	U
Biphenyl	5	8.5		5.1	U	49		250	U	46		27	
Bis(2-Ethylhexyl)phthalate	5	5	U	5.1	U	5	U	250	U	5	U	55	
Chrysene	0.002	0.2	U	0.2	U	200	U	10	U	4	U	10	U
Fluorene	50	8.9	0.2	U	200	U	61		53		36		42
Indeno[1,2,3-cd]Pyrene	0.002	0.2	U	0.2	U	200	U	10	U	2	U	10	U
Naphthalene	10	300		0.62		11000		1400		1600		990	
Phenanthrene	50	-	U	0.2	U	200	U	120		74		52	
Phenol	1	7	U	7.2	U	7.7		350	U	7	U	7	U
Total Metals													
Arsenic, Total	25	20	6	17		13		10		18		19	
Iron, Total	300	21000	9200	3200		11000		5000		9800		12000	
Lead, Total	25	158	45	17		117		29		86		166	
Magnesium, Total	35000	71000	48000	120000		87000		85000		93000		84000	
Manganese, Total	300	598	403	327		636		430		492		558	
Mercury, Total	0.7	0.5	0.2	U	0.3		0.6		0.2		0.5		0.9
Sodium, Total	20000	96000	100000	98000		89000		68000		76000		67000	
General Chemistry													
Cyanide, Total	200	1920	1920	1090		973		1110		1540		1410	

- Notes:**
- Groundwater samples were compared to New York State Department of Environmental Conservation (NYSDEC) Technical and Operations Guidance Series (TOGS 1.1.1) Ambient Water Quality Standards (AWQS).
 - Only compounds with exceedances are shown in the table.
 - NYSDEC TOGS 1.1.1 AWQS exceedances are highlighted and bolded.
 - Reporting Limits (RL) above NYSDEC TOGS standards are italicized.
 - µg/L = micrograms per liter
 - VOCs = Volatile Organic Compounds
 - SVOCs = Semivolatile Organic Compounds
 - NA = Not Analyzed
 - Monitoring well MW-S was destroyed during construction activities. No data is available for the 3rd Quarter 2009.
 - Monitoring wells MW-N and MW-S were destroyed due to construction activities. Monitoring wells MW-N2 and MW-S2 were installed in the approximate locations of MW-N and MW-S once construction was complete. New monitoring well locations are shown on Figure 2.

Qualifiers:
U = The analyte was analyzed for, but was not detected at a level greater than or equal to RL.
J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

Table 1
VOC, SVOC, Metals and Cyanide Exceedances in Groundwater Samples
River Place II
New York, New York
Langan Project No. 170040901

LOCATION SAMPLING DATE LAB SAMPLE ID	NYSDEC TOGS 1.1 AWQS	Quality Control												2011 YEAR 1	2012 YEAR 2		
		2009				2010				2011							
		1st Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	TRIP BLANK-101711	TRIP BLANK	TRIP BLANK				
		FB-3-16-09	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK-1-7-2010	TB-3-01-10	TB-6-10-10	TB-9-8-10	TB-12-15-10	TRIP BLANK-101711	TRIP BLANK	TRIP BLANK	10/17/2011	10/17/2012		
		3/16/2009	3/16/2009	6/17/2009	9/18/2009	1/7/2010	3/1/2010	6/10/2010	9/8/2010	12/15/2010	L1003006-03	L1008735-03	L1013903-03	L1020042-03	L1116955-03	L1218727-03	
		L0903143-04	L0903143-05	L0908040-03	L0913185-02	L1000282-03											
VOCs (µg/L)																	
1,2,4-Trimethylbenzene		5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	
1,3,5-Trimethylbenzene		5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	
Benzene		1	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	
Ethylbenzene		5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	
Isopropylbenzene		5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	
Methylene chloride		5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	
Naphthalene		10	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	
n-Butylbenzene		5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	
n-Propylbenzene		5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	
o-Xylene		5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
p/m-Xylene		5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
p-Isopropyltoluene		5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	
Styrene		5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
Toluene		5	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U	
SVOCs (µg/L)																	
2,4-Dimethylphenol		50	9.6	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Acenaphthene		20	0.19	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Benz(a)anthracene		0.002	0.19	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Benz(a)pyrene		0	0.19	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Benz(b)fluoranthene		0.002	0.19	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Benz(k)fluoranthene		0.002	0.19	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Biphenyl		5	4.8	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Bis(2-Ethylhexyl)phthalate		5	4.8	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Chrysene		0.002	0.19	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Fluorene		50	0.19	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Indeno(1,2,3-cd)Pyrene		0.002	0.19	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Naphthalene		10	0.34	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Phenanthrene		50	0.19	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Phenol		1	6.7	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Total Metals																	
Arsenic, Total		25	5	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Iron, Total		300	50	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Lead, Total		25	10	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Magnesium, Total		35000	100	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Manganese, Total		300	10	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Mercury, Total		0.7	0.2	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Sodium, Total		20000	2000	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
General Chemistry																	
Cyanide, Total		200	5	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

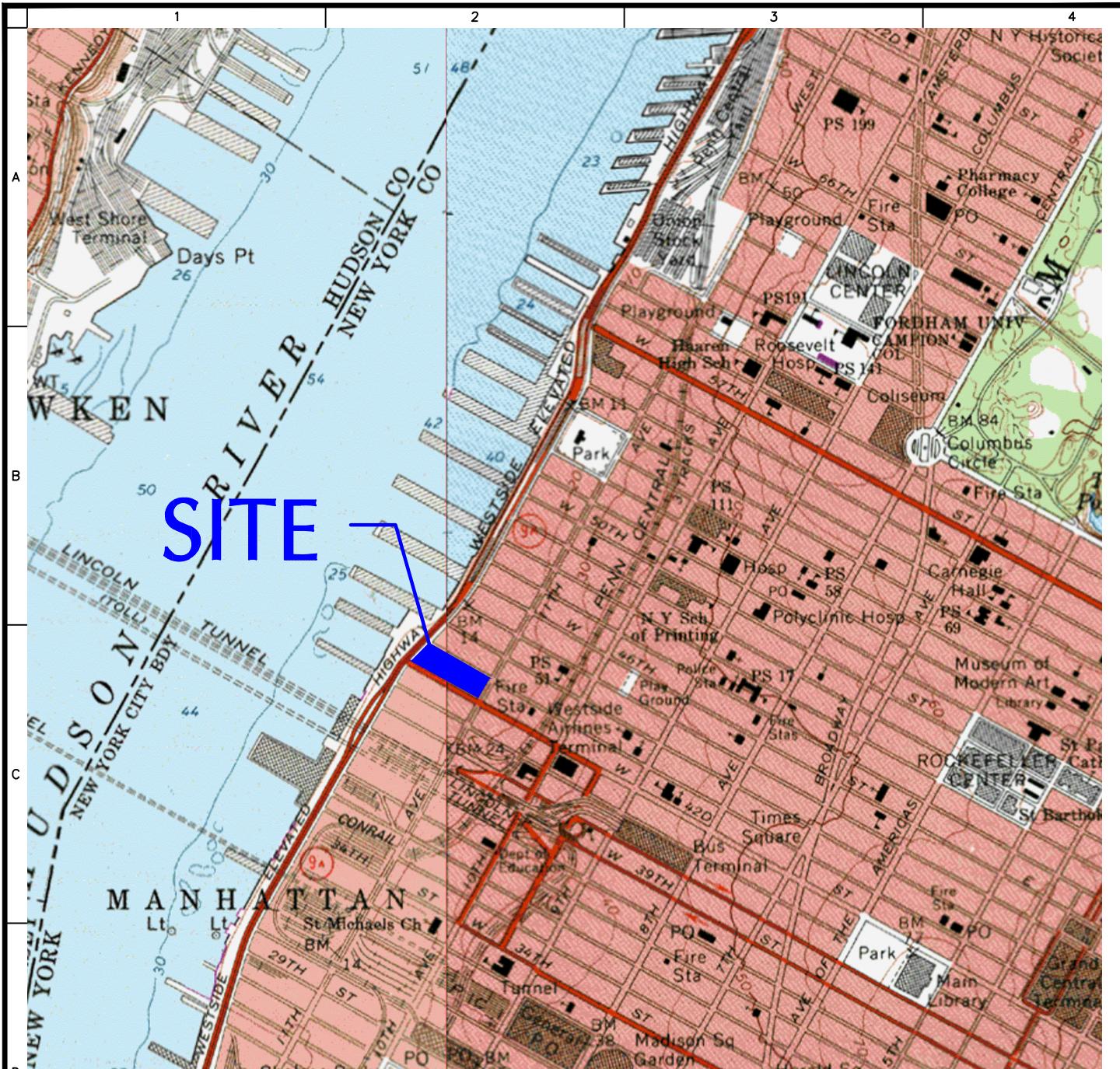
Notes:

- Groundwater samples were compared to New York State Department of Environmental Conservation (NYSDEC) Technical and Operations Guidance Series (TOGS 1.1.1) Ambient Water Quality Standards (AWQS).
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- Monitoring wells MW-N and MW-S were destroyed due to construction activities. Monitoring wells MW-N2 and MW-S2 were installed in the approximate locations of MW-N and MW-S once construction was complete. New monitoring well locations are shown on Figure 2.

Qualifiers:

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J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

FIGURES



WARNING: IT IS A VIOLATION OF THE NYS
EDUCATION LAW ARTICLE 145 FOR ANY
PERSON, UNLESS HE IS ACTING UNDER THE
DIRECTION OF A LICENSED PROFESSIONAL
ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

BASE MAP OBTAINED FROM THE UNITED STATES GEOLOGICAL SURVEY (USGS), TOPOGRAPHIC MAPS, CENTRAL PARK, NY QUADRANGLE, DATED 1979, AND WEEHAWKEN NJ, NY QUADRANGLE, DATED 1967 ABD REVISED 1981.

Project	Figure Title	Project No.	Figure
RIVER PLACE I AND II		170040901	1
SITE LOCATION MAP		Date	
		10/22/2014	
		Scale	
NTS		Drawn By	NCR
		Checked By	JH
		Submission Date	November 2014
		Sheet	1 of 2

LANGAN
21 Penn Plaza, 360 West 31st Street, 8th Floor
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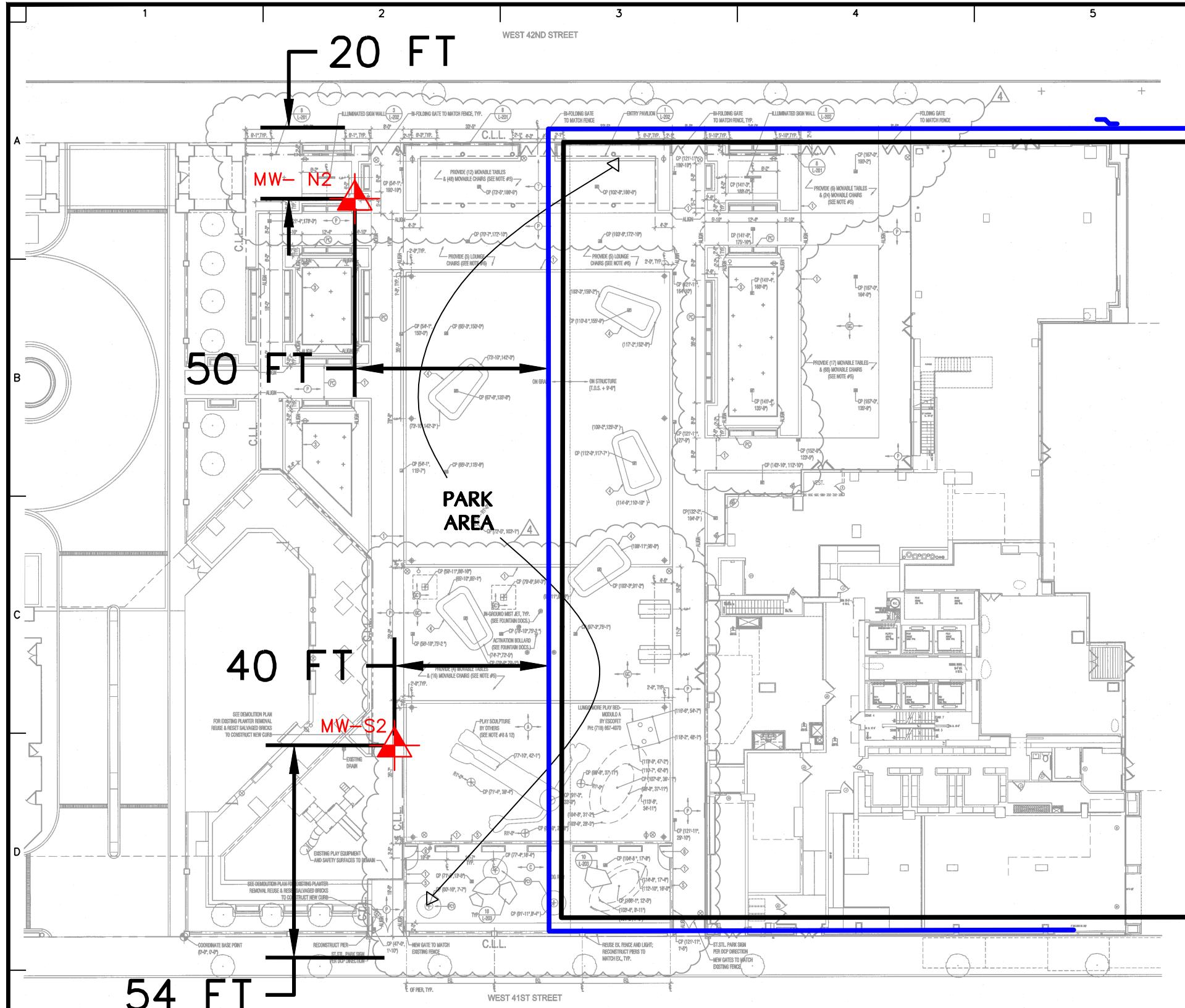
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Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project

NEW YORK

Figure Title

SITE LOCATION
MAP



NOTES:

1. BASEMAP TAKEN FROM MANHATTAN SURVEYING ARCHITECTURAL SURVEY DATED JUNE 3, 2006 AND PARK LAYOUT AND MATERIALS PLAN BY COSTAS KONDYLIS AND PARTNERS LLP ARCHITECTS DATED OCTOBER 1, 2008.
 2. MONITORING WELLS WERE RE-ISNTALLED ON DECEMBER 28, 2009. LOCATIONS ARE APPROXIMATE.

LEGEND:



APPROXIMATE LOCATION OF MONITORING WELLS IN ACCORDANCE WITH SITE MANAGEMENT PLAN



PROPERTY BOUNDARY (RIVER PLACE II)

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

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Project

RIVER PLACE I & II

Figure Title

MONITORING WELL LOCATION MAP

Project No.	
170040901	
Date	10/23/2014
Scale	NTS
Drawn By	Checked By
NCR	JH
Submission Date	

2

ATTACHMENT A
GROUNDWATER SAMPLING FORMS

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site:	Riverplace I and II	Well#/Location:	MW-N2	Job No.	170040901
Date:	10/14/2014	Weather:	60s - Partly Cloudy, Windy	Sampling Personnel:	M.Boguszewski

Well Information	
Sample ID	MW-N2-101414
Well Depth (ft)	19.62
Screened Interval (ft)	---
Casing Elevation (msl)	---
Casing Diameter (in)	2
Depth to Water (ft)	9.52
Water Elevation (msl)	---
Casing Volume (gal)	1.65
PID/FID Reading (ppm)	---

Purging Information	
Purging Method	Wattera Pump
Purging Rate (gpm)	0.10
Start Purge Time	8:35
End Purge Time	9:52
Volume Purged (gal)	8

Sampling Information	
Sampling Method	Wettera Pump
Start Sampling Time	9:55
End Sampling Time	10:05
Depth Before Sampling (ft)	9.78
Number Bottles Collected	8

Notes/Remarks

8:00-8:35 pump/generator troubleshooting



Langan Engineering and Environmental Services

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site:	Riverplace I and II	Well#/Location:	MW-S2	Job No.	170040901
Date:	10/14/2014	Weather:	60s - Partly Cloudy, Windy	Sampling Personnel:	M.Boguszewski

Well Information	
Sample ID	MW-S2-101414
Well Depth (ft)	19.48
Screened Interval (ft)	—
Casing Elevation (msl)	—
Casing Diameter (in)	2
Depth to Water (ft)	9.65
Water Elevation (msl)	—
Casing Volume (gal)	1.60
PID/FID Reading (ppm)	—

Purging Information	
Purging Method	Wattera Pump
Purging Rate (gpm)	0.10
Start Purge Time	10:30
End Purge Time	12:55
Volume Purged (gal)	14

Sampling Information	
Sampling Method	Wettera Pump
Start Sampling Time	12:55
End Sampling Time	13:05
Depth Before Sampling (ft)	10.40
Number Bottles Collected	8

Notes/Remarks

* Horiba cell cleaned (turbidity reading was over 1000); turbidity reading didn't change after the cleaning

** After over two hours of purging the monitoring well, the turbidity did not drop below 890 NTUs.

*** Sheen was observed on the purged water in the bucket



Langan Engineering and Environmental Services

ATTACHMENT B
LABORATORY ANALYTICAL REPORTS, CHAIN-OF-
CUSTODY AND CERTIFICATIONS



ANALYTICAL REPORT

Lab Number:	L1424443
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Nicole Rice
Phone:	(212) 479-5400
Project Name:	RIVER PLACE I + II
Project Number:	170040901
Report Date:	10/23/14

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1424443-01	MW-N2_101414	WATER	650 WEST 42ND STREET	10/14/14 09:55	10/15/14
L1424443-02	MW-S2_101414	WATER	650 WEST 42ND STREET	10/14/14 12:55	10/15/14
L1424443-03	WW01_101414	WATER	650 WEST 42ND STREET	10/14/14 13:10	10/15/14
L1424443-04	TB01_101414	WATER	650 WEST 42ND STREET	10/14/14 00:00	10/15/14

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

Sample "TB01_101414" was not received.

Semivolatile Organics

L1424443-01 and -02 have elevated detection limits due to the dilutions required by the sample matrices.

Semivolatile Organics by SIM

L1424443-01: The surrogate recoveries are below the acceptance criteria for 2-fluorophenol (0%), phenol-d6 (0%), nitrobenzene-d5 (0%), 2-fluorobiphenyl (0%), 2,4,6-tribromophenol (0%), and 4-terphenyl-d14 (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

Metals

The WG733087-1 Method Blank, associated with L1424443-01 and -02, has a concentration above the reporting limit for aluminum. Since the associated sample concentrations are greater than 10x the blank concentration for this analyte, no qualification of the results was performed.

The WG733087-4 MS recoveries for calcium (500%), magnesium (222%), and sodium (540%), performed on L1424443-01, do not apply because the sample concentrations are greater than four times the spike amounts added.

The WG733087-4 MS recovery, performed on L1424443-01, is outside the acceptance criteria for iron (185%) and potassium (148%). A post digestion spike was performed and yielded unacceptable recoveries for iron (144%) and potassium (152%). This has been attributed to sample matrix.

The WG733087-3 Laboratory Duplicate RPD, performed on L1424443-01, is outside the acceptance criteria for nickel (24%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Case Narrative (continued)

for the laboratory duplicate.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 10/23/14

ORGANICS



VOLATILES



Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

SAMPLE RESULTS

Lab ID:	L1424443-01	D	Date Collected:	10/14/14 09:55
Client ID:	MW-N2_101414		Date Received:	10/15/14
Sample Location:	650 WEST 42ND STREET		Field Prep:	Not Specified
Matrix:	Water			
Analytical Method:	1,8260C			
Analytical Date:	10/19/14 18:32			
Analyst:	PD			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	250	70.	100
1,1-Dichloroethane	ND		ug/l	250	70.	100
Chloroform	ND		ug/l	250	70.	100
Carbon tetrachloride	ND		ug/l	50	13.	100
1,2-Dichloropropane	ND		ug/l	100	13.	100
Dibromochloromethane	ND		ug/l	50	15.	100
1,1,2-Trichloroethane	ND		ug/l	150	50.	100
Tetrachloroethene	ND		ug/l	50	18.	100
Chlorobenzene	ND		ug/l	250	70.	100
Trichlorofluoromethane	ND		ug/l	250	70.	100
1,2-Dichloroethane	ND		ug/l	50	13.	100
1,1,1-Trichloroethane	ND		ug/l	250	70.	100
Bromodichloromethane	ND		ug/l	50	19.	100
trans-1,3-Dichloropropene	ND		ug/l	50	16.	100
cis-1,3-Dichloropropene	ND		ug/l	50	14.	100
1,3-Dichloropropene, Total	ND		ug/l	50	14.	100
1,1-Dichloropropene	ND		ug/l	250	70.	100
Bromoform	ND		ug/l	200	65.	100
1,1,2,2-Tetrachloroethane	ND		ug/l	50	14.	100
Benzene	1400		ug/l	50	16.	100
Toluene	120	J	ug/l	250	70.	100
Ethylbenzene	300		ug/l	250	70.	100
Chloromethane	ND		ug/l	250	70.	100
Bromomethane	ND		ug/l	250	70.	100
Vinyl chloride	ND		ug/l	100	33.	100
Chloroethane	ND		ug/l	250	70.	100
1,1-Dichloroethene	ND		ug/l	50	14.	100
trans-1,2-Dichloroethene	ND		ug/l	250	70.	100
Trichloroethene	ND		ug/l	50	18.	100
1,2-Dichlorobenzene	ND		ug/l	250	70.	100



Project Name: RIVER PLACE I + II

Lab Number: L1424443

Project Number: 170040901

Report Date: 10/23/14

SAMPLE RESULTS

Lab ID:	L1424443-01	D	Date Collected:	10/14/14 09:55
Client ID:	MW-N2_101414		Date Received:	10/15/14
Sample Location:	650 WEST 42ND STREET		Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND	ug/l	250	70.	100	
1,4-Dichlorobenzene	ND	ug/l	250	70.	100	
Methyl tert butyl ether	ND	ug/l	250	70.	100	
p/m-Xylene	370	ug/l	250	70.	100	
o-Xylene	280	ug/l	250	70.	100	
Xylenes, Total	650	ug/l	250	70.	100	
cis-1,2-Dichloroethene	ND	ug/l	250	70.	100	
1,2-Dichloroethene, Total	ND	ug/l	250	70.	100	
Dibromomethane	ND	ug/l	500	100	100	
1,2,3-Trichloropropane	ND	ug/l	250	70.	100	
Acrylonitrile	ND	ug/l	500	150	100	
Styrene	ND	ug/l	250	70.	100	
Dichlorodifluoromethane	ND	ug/l	500	100	100	
Acetone	ND	ug/l	500	150	100	
Carbon disulfide	ND	ug/l	500	100	100	
2-Butanone	ND	ug/l	500	190	100	
Vinyl acetate	ND	ug/l	500	100	100	
4-Methyl-2-pentanone	ND	ug/l	500	100	100	
2-Hexanone	ND	ug/l	500	100	100	
Bromochloromethane	ND	ug/l	250	70.	100	
2,2-Dichloropropane	ND	ug/l	250	70.	100	
1,2-Dibromoethane	ND	ug/l	200	65.	100	
1,3-Dichloropropane	ND	ug/l	250	70.	100	
1,1,1,2-Tetrachloroethane	ND	ug/l	250	70.	100	
Bromobenzene	ND	ug/l	250	70.	100	
n-Butylbenzene	ND	ug/l	250	70.	100	
sec-Butylbenzene	ND	ug/l	250	70.	100	
tert-Butylbenzene	ND	ug/l	250	70.	100	
o-Chlorotoluene	ND	ug/l	250	70.	100	
p-Chlorotoluene	ND	ug/l	250	70.	100	
1,2-Dibromo-3-chloropropane	ND	ug/l	250	70.	100	
Hexachlorobutadiene	ND	ug/l	250	70.	100	
Isopropylbenzene	ND	ug/l	250	70.	100	
p-Isopropyltoluene	ND	ug/l	250	70.	100	
Naphthalene	3900	ug/l	250	70.	100	
n-Propylbenzene	ND	ug/l	250	70.	100	
1,2,3-Trichlorobenzene	ND	ug/l	250	70.	100	
1,2,4-Trichlorobenzene	ND	ug/l	250	70.	100	
1,3,5-Trimethylbenzene	ND	ug/l	250	70.	100	

Project Name: RIVER PLACE I + II

Lab Number: L1424443

Project Number: 170040901

Report Date: 10/23/14

SAMPLE RESULTS

Lab ID:	L1424443-01	D	Date Collected:	10/14/14 09:55
Client ID:	MW-N2_101414		Date Received:	10/15/14
Sample Location:	650 WEST 42ND STREET		Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	130	J	ug/l	250	70.	100
1,4-Dioxane	ND		ug/l	25000	4100	100
p-Diethylbenzene	ND		ug/l	200	70.	100
p-Ethyltoluene	73	J	ug/l	200	70.	100
1,2,4,5-Tetramethylbenzene	ND		ug/l	200	65.	100
Ethyl ether	ND		ug/l	250	70.	100
trans-1,4-Dichloro-2-butene	ND		ug/l	250	70.	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	103		70-130

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

SAMPLE RESULTS

Lab ID:	L1424443-02	Date Collected:	10/14/14 12:55
Client ID:	MW-S2_101414	Date Received:	10/15/14
Sample Location:	650 WEST 42ND STREET	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	1,8260C		
Analytical Date:	10/19/14 19:06		
Analyst:	PD		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	44		ug/l	0.50	0.16	1
Toluene	3.0		ug/l	2.5	0.70	1
Ethylbenzene	60		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.19	J	ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

SAMPLE RESULTS

Lab ID:	L1424443-02		Date Collected:	10/14/14 12:55		
Client ID:	MW-S2_101414		Date Received:	10/15/14		
Sample Location:	650 WEST 42ND STREET		Field Prep:	Not Specified		
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	4.8		ug/l	2.5	0.70	1
o-Xylene	12		ug/l	2.5	0.70	1
Xylenes, Total	17		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	1.1	J	ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	0.77	J	ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	19		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	36		ug/l	2.5	0.70	1
n-Propylbenzene	9.3		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: RIVER PLACE I + II

Lab Number: L1424443

Project Number: 170040901

Report Date: 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-02 Date Collected: 10/14/14 12:55
 Client ID: MW-S2_101414 Date Received: 10/15/14
 Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	7.2		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	4.2		ug/l	2.0	0.70	1
p-Ethyltoluene	2.3		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	1.7	J	ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	105		70-130

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

SAMPLE RESULTS

Lab ID:	L1424443-03	D	Date Collected:	10/14/14 13:10
Client ID:	WW01_101414		Date Received:	10/15/14
Sample Location:	650 WEST 42ND STREET		Field Prep:	Not Specified
Matrix:	Water			
Analytical Method:	1,8260C			
Analytical Date:	10/19/14 19:40			
Analyst:	PD			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	25	7.0	10
1,1-Dichloroethane	ND		ug/l	25	7.0	10
Chloroform	ND		ug/l	25	7.0	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
1,2-Dichloropropane	ND		ug/l	10	1.3	10
Dibromochloromethane	ND		ug/l	5.0	1.5	10
1,1,2-Trichloroethane	ND		ug/l	15	5.0	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	25	7.0	10
Trichlorofluoromethane	ND		ug/l	25	7.0	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
1,1,1-Trichloroethane	ND		ug/l	25	7.0	10
Bromodichloromethane	ND		ug/l	5.0	1.9	10
trans-1,3-Dichloropropene	ND		ug/l	5.0	1.6	10
cis-1,3-Dichloropropene	ND		ug/l	5.0	1.4	10
1,3-Dichloropropene, Total	ND		ug/l	5.0	1.4	10
1,1-Dichloropropene	ND		ug/l	25	7.0	10
Bromoform	ND		ug/l	20	6.5	10
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	1.4	10
Benzene	260		ug/l	5.0	1.6	10
Toluene	21	J	ug/l	25	7.0	10
Ethylbenzene	68		ug/l	25	7.0	10
Chloromethane	ND		ug/l	25	7.0	10
Bromomethane	ND		ug/l	25	7.0	10
Vinyl chloride	ND		ug/l	10	3.3	10
Chloroethane	ND		ug/l	25	7.0	10
1,1-Dichloroethene	ND		ug/l	5.0	1.4	10
trans-1,2-Dichloroethene	ND		ug/l	25	7.0	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,2-Dichlorobenzene	ND		ug/l	25	7.0	10



Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

SAMPLE RESULTS

Lab ID:	L1424443-03	D		Date Collected:	10/14/14 13:10	
Client ID:	WW01_101414			Date Received:	10/15/14	
Sample Location:	650 WEST 42ND STREET			Field Prep:	Not Specified	
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	25	7.0	10
1,4-Dichlorobenzene	ND		ug/l	25	7.0	10
Methyl tert butyl ether	ND		ug/l	25	7.0	10
p/m-Xylene	51		ug/l	25	7.0	10
o-Xylene	46		ug/l	25	7.0	10
Xylenes, Total	97		ug/l	25	7.0	10
cis-1,2-Dichloroethene	ND		ug/l	25	7.0	10
1,2-Dichloroethene, Total	ND		ug/l	25	7.0	10
Dibromomethane	ND		ug/l	50	10.	10
1,2,3-Trichloropropane	ND		ug/l	25	7.0	10
Acrylonitrile	ND		ug/l	50	15.	10
Styrene	ND		ug/l	25	7.0	10
Dichlorodifluoromethane	ND		ug/l	50	10.	10
Acetone	ND		ug/l	50	15.	10
Carbon disulfide	ND		ug/l	50	10.	10
2-Butanone	ND		ug/l	50	19.	10
Vinyl acetate	ND		ug/l	50	10.	10
4-Methyl-2-pentanone	ND		ug/l	50	10.	10
2-Hexanone	ND		ug/l	50	10.	10
Bromochloromethane	ND		ug/l	25	7.0	10
2,2-Dichloropropane	ND		ug/l	25	7.0	10
1,2-Dibromoethane	ND		ug/l	20	6.5	10
1,3-Dichloropropane	ND		ug/l	25	7.0	10
1,1,1,2-Tetrachloroethane	ND		ug/l	25	7.0	10
Bromobenzene	ND		ug/l	25	7.0	10
n-Butylbenzene	ND		ug/l	25	7.0	10
sec-Butylbenzene	ND		ug/l	25	7.0	10
tert-Butylbenzene	ND		ug/l	25	7.0	10
o-Chlorotoluene	ND		ug/l	25	7.0	10
p-Chlorotoluene	ND		ug/l	25	7.0	10
1,2-Dibromo-3-chloropropane	ND		ug/l	25	7.0	10
Hexachlorobutadiene	ND		ug/l	25	7.0	10
Isopropylbenzene	12	J	ug/l	25	7.0	10
p-Isopropyltoluene	ND		ug/l	25	7.0	10
Naphthalene	570		ug/l	25	7.0	10
n-Propylbenzene	ND		ug/l	25	7.0	10
1,2,3-Trichlorobenzene	ND		ug/l	25	7.0	10
1,2,4-Trichlorobenzene	ND		ug/l	25	7.0	10
1,3,5-Trimethylbenzene	ND		ug/l	25	7.0	10

Project Name: RIVER PLACE I + II

Lab Number: L1424443

Project Number: 170040901

Report Date: 10/23/14

SAMPLE RESULTS

Lab ID:	L1424443-03	D	Date Collected:	10/14/14 13:10
Client ID:	WW01_101414		Date Received:	10/15/14
Sample Location:	650 WEST 42ND STREET		Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	16	J	ug/l	25	7.0	10
1,4-Dioxane	ND		ug/l	2500	410	10
p-Diethylbenzene	ND		ug/l	20	7.0	10
p-Ethyltoluene	8.6	J	ug/l	20	7.0	10
1,2,4,5-Tetramethylbenzene	ND		ug/l	20	6.5	10
Ethyl ether	ND		ug/l	25	7.0	10
trans-1,4-Dichloro-2-butene	ND		ug/l	25	7.0	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	104		70-130

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/19/14 16:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG732476-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
2-Chloroethylvinyl ether	ND		ug/l	10	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.33
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70



Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/19/14 16:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG732476-3					
Trichloroethene	ND	ug/l	0.50	0.18	
1,2-Dichlorobenzene	ND	ug/l	2.5	0.70	
1,3-Dichlorobenzene	ND	ug/l	2.5	0.70	
1,4-Dichlorobenzene	ND	ug/l	2.5	0.70	
Methyl tert butyl ether	ND	ug/l	2.5	0.70	
p/m-Xylene	ND	ug/l	2.5	0.70	
o-Xylene	ND	ug/l	2.5	0.70	
Xylenes, Total	ND	ug/l	2.5	0.70	
cis-1,2-Dichloroethene	ND	ug/l	2.5	0.70	
1,2-Dichloroethene, Total	ND	ug/l	2.5	0.70	
Dibromomethane	ND	ug/l	5.0	1.0	
1,2,3-Trichloropropane	ND	ug/l	2.5	0.70	
Acrylonitrile	ND	ug/l	5.0	1.5	
Diisopropyl Ether	ND	ug/l	2.0	0.65	
Tert-Butyl Alcohol	ND	ug/l	10	0.90	
Styrene	ND	ug/l	2.5	0.70	
Dichlorodifluoromethane	ND	ug/l	5.0	1.0	
Acetone	ND	ug/l	5.0	1.5	
Carbon disulfide	ND	ug/l	5.0	1.0	
2-Butanone	ND	ug/l	5.0	1.9	
Vinyl acetate	ND	ug/l	5.0	1.0	
4-Methyl-2-pentanone	ND	ug/l	5.0	1.0	
2-Hexanone	ND	ug/l	5.0	1.0	
Acrolein	ND	ug/l	5.0	0.63	
Bromochloromethane	ND	ug/l	2.5	0.70	
2,2-Dichloropropane	ND	ug/l	2.5	0.70	
1,2-Dibromoethane	ND	ug/l	2.0	0.65	
1,3-Dichloropropane	ND	ug/l	2.5	0.70	
1,1,1,2-Tetrachloroethane	ND	ug/l	2.5	0.70	



Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/19/14 16:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG732476-3					
Bromobenzene	ND	ug/l	2.5	0.70	
n-Butylbenzene	ND	ug/l	2.5	0.70	
sec-Butylbenzene	ND	ug/l	2.5	0.70	
tert-Butylbenzene	ND	ug/l	2.5	0.70	
o-Chlorotoluene	ND	ug/l	2.5	0.70	
p-Chlorotoluene	ND	ug/l	2.5	0.70	
1,2-Dibromo-3-chloropropane	ND	ug/l	2.5	0.70	
Hexachlorobutadiene	ND	ug/l	2.5	0.70	
Isopropylbenzene	ND	ug/l	2.5	0.70	
p-Isopropyltoluene	ND	ug/l	2.5	0.70	
Naphthalene	ND	ug/l	2.5	0.70	
n-Propylbenzene	ND	ug/l	2.5	0.70	
1,2,3-Trichlorobenzene	ND	ug/l	2.5	0.70	
1,2,4-Trichlorobenzene	ND	ug/l	2.5	0.70	
1,3,5-Trimethylbenzene	ND	ug/l	2.5	0.70	
1,2,4-Trimethylbenzene	ND	ug/l	2.5	0.70	
Methyl Acetate	ND	ug/l	2.0	0.23	
Ethyl Acetate	ND	ug/l	10	0.70	
Cyclohexane	ND	ug/l	10	0.27	
Ethyl-Tert-Butyl-Ether	ND	ug/l	2.5	0.70	
Tertiary-Amyl Methyl Ether	ND	ug/l	2.0	0.28	
1,4-Dioxane	ND	ug/l	250	41.	
Freon-113	ND	ug/l	2.5	0.70	
p-Diethylbenzene	ND	ug/l	2.0	0.70	
p-Ethyltoluene	ND	ug/l	2.0	0.70	
1,2,4,5-Tetramethylbenzene	ND	ug/l	2.0	0.65	
Tetrahydrofuran	ND	ug/l	5.0	1.5	
Ethyl ether	ND	ug/l	2.5	0.70	
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5	0.70	



Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/19/14 16:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s):	01-03	Batch:	WG732476-3		
Iodomethane	ND		ug/l	5.0	5.0
Methyl cyclohexane	ND		ug/l	10	0.40

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	106		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG732476-1 WG732476-2								
Methylene chloride	84		82		70-130	2		20
1,1-Dichloroethane	87		86		70-130	1		20
Chloroform	95		91		70-130	4		20
2-Chloroethylvinyl ether	64	Q	76		70-130	17		20
Carbon tetrachloride	93		91		63-132	2		20
1,2-Dichloropropane	85		83		70-130	2		20
Dibromochloromethane	98		96		63-130	2		20
1,1,2-Trichloroethane	88		88		70-130	0		20
Tetrachloroethene	95		93		70-130	2		20
Chlorobenzene	96		94		75-130	2		20
Trichlorofluoromethane	90		85		62-150	6		20
1,2-Dichloroethane	95		93		70-130	2		20
1,1,1-Trichloroethane	94		92		67-130	2		20
Bromodichloromethane	97		95		67-130	2		20
trans-1,3-Dichloropropene	95		92		70-130	3		20
cis-1,3-Dichloropropene	94		92		70-130	2		20
1,1-Dichloropropene	86		86		70-130	0		20
Bromoform	100		97		54-136	3		20
1,1,2,2-Tetrachloroethane	88		86		67-130	2		20
Benzene	87		86		70-130	1		20
Toluene	89		89		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG732476-1 WG732476-2								
Ethylbenzene	93		92		70-130	1		20
Chloromethane	67		60	Q	64-130	11		20
Bromomethane	109		108		39-139	1		20
Vinyl chloride	77		76		55-140	1		20
Chloroethane	88		83		55-138	6		20
1,1-Dichloroethene	84		81		61-145	4		20
trans-1,2-Dichloroethene	85		85		70-130	0		20
Trichloroethene	92		91		70-130	1		20
1,2-Dichlorobenzene	97		94		70-130	3		20
1,3-Dichlorobenzene	96		94		70-130	2		20
1,4-Dichlorobenzene	96		94		70-130	2		20
Methyl tert butyl ether	87		87		63-130	0		20
p/m-Xylene	96		94		70-130	2		20
o-Xylene	99		97		70-130	2		20
cis-1,2-Dichloroethene	92		87		70-130	6		20
Dibromomethane	92		91		70-130	1		20
1,2,3-Trichloropropane	87		84		64-130	4		20
Acrylonitrile	81		82		70-130	1		20
Diisopropyl Ether	82		80		70-130	2		20
Tert-Butyl Alcohol	83		87		70-130	5		20
Styrene	97		96		70-130	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG732476-1 WG732476-2								
Dichlorodifluoromethane	49		47		36-147	4		20
Acetone	94		91		58-148	3		20
Carbon disulfide	80		78		51-130	3		20
2-Butanone	71		67		63-138	6		20
Vinyl acetate	80		78		70-130	3		20
4-Methyl-2-pentanone	82		82		59-130	0		20
2-Hexanone	78		73		57-130	7		20
Acrolein	85		85		40-160	0		20
Bromochloromethane	102		100		70-130	2		20
2,2-Dichloropropane	99		94		63-133	5		20
1,2-Dibromoethane	93		91		70-130	2		20
1,3-Dichloropropane	90		88		70-130	2		20
1,1,1,2-Tetrachloroethane	102		101		64-130	1		20
Bromobenzene	99		97		70-130	2		20
n-Butylbenzene	87		83		53-136	5		20
sec-Butylbenzene	92		88		70-130	4		20
tert-Butylbenzene	96		93		70-130	3		20
o-Chlorotoluene	94		91		70-130	3		20
p-Chlorotoluene	94		92		70-130	2		20
1,2-Dibromo-3-chloropropane	90		87		41-144	3		20
Hexachlorobutadiene	101		96		63-130	5		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG732476-1 WG732476-2								
Isopropylbenzene	99		96		70-130	3		20
p-Isopropyltoluene	93		89		70-130	4		20
Naphthalene	90		87		70-130	3		20
n-Propylbenzene	91		88		69-130	3		20
1,2,3-Trichlorobenzene	91		90		70-130	1		20
1,2,4-Trichlorobenzene	95		91		70-130	4		20
1,3,5-Trimethylbenzene	96		92		64-130	4		20
1,2,4-Trimethylbenzene	92		88		70-130	4		20
Methyl Acetate	82		80		70-130	2		20
Ethyl Acetate	75		73		70-130	3		20
Cyclohexane	76		72		70-130	5		20
Ethyl-Tert-Butyl-Ether	87		86		70-130	1		20
Tertiary-Amyl Methyl Ether	88		89		66-130	1		20
1,4-Dioxane	91		94		56-162	3		20
Freon-113	82		80		70-130	2		20
p-Diethylbenzene	100		97		70-130	3		20
p-Ethyltoluene	95		91		70-130	4		20
1,2,4,5-Tetramethylbenzene	91		87		70-130	4		20
Ethyl ether	84		83		59-134	1		20
trans-1,4-Dichloro-2-butene	83		82		70-130	1		20
Iodomethane	92		96		70-130	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> <i>Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> <i>Limits</i>
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG732476-1 WG732476-2								
Methyl cyclohexane	83		81		70-130	2		20

Surrogate	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
1,2-Dichloroethane-d4	102		103		70-130
Toluene-d8	97		98		70-130
4-Bromofluorobenzene	96		96		70-130
Dibromofluoromethane	105		106		70-130

SEMIVOLATILES



Project Name: RIVER PLACE I + II

Lab Number: L1424443

Project Number: 170040901

Report Date: 10/23/14

SAMPLE RESULTS

Lab ID:	L1424443-01	D2	Date Collected:	10/14/14 09:55
Client ID:	MW-N2_101414		Date Received:	10/15/14
Sample Location:	650 WEST 42ND STREET		Field Prep:	Not Specified
Matrix:	Water		Extraction Method:	EPA 3510C
Analytical Method:	1,8270D-SIM		Extraction Date:	10/18/14 11:41
Analytical Date:	10/22/14 10:38			
Analyst:	MW			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	3000		ug/l	80	26.	400

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-01 D
Client ID: MW-N2_101414
Sample Location: 650 WEST 42ND STREET
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 10/22/14 21:52
Analyst: PS

Date Collected: 10/14/14 09:55
Date Received: 10/15/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/18/14 11:39

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	25	1.0	5
Bis(2-chloroethyl)ether	ND		ug/l	10	2.0	5
1,2-Dichlorobenzene	ND		ug/l	10	1.5	5
1,3-Dichlorobenzene	ND		ug/l	10	1.8	5
1,4-Dichlorobenzene	ND		ug/l	10	1.6	5
3,3'-Dichlorobenzidine	ND		ug/l	25	2.4	5
2,4-Dinitrotoluene	ND		ug/l	25	5.2	5
2,6-Dinitrotoluene	ND		ug/l	25	4.4	5
4-Chlorophenyl phenyl ether	ND		ug/l	10	1.8	5
4-Bromophenyl phenyl ether	ND		ug/l	10	2.1	5
Bis(2-chloroisopropyl)ether	ND		ug/l	10	3.0	5
Bis(2-chloroethoxy)methane	ND		ug/l	25	3.0	5
Hexachlorocyclopentadiene	ND		ug/l	100	2.9	5
Isophorone	ND		ug/l	25	3.9	5
Nitrobenzene	ND		ug/l	10	2.0	5
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	10	1.7	5
n-Nitrosodi-n-propylamine	ND		ug/l	25	3.2	5
Bis(2-Ethylhexyl)phthalate	ND		ug/l	15	4.6	5
Butyl benzyl phthalate	ND		ug/l	25	5.6	5
Di-n-butylphthalate	ND		ug/l	25	3.8	5
Di-n-octylphthalate	ND		ug/l	25	6.0	5
Diethyl phthalate	ND		ug/l	25	2.0	5
Dimethyl phthalate	ND		ug/l	25	1.7	5
Biphenyl	33		ug/l	10	1.2	5
4-Chloroaniline	ND		ug/l	25	4.2	5
2-Nitroaniline	ND		ug/l	25	4.8	5
3-Nitroaniline	ND		ug/l	25	3.3	5
4-Nitroaniline	ND		ug/l	25	4.2	5
Dibenzofuran	53		ug/l	10	1.1	5
1,2,4,5-Tetrachlorobenzene	ND		ug/l	50	1.8	5



Project Name: RIVER PLACE I + II

Lab Number: L1424443

Project Number: 170040901

Report Date: 10/23/14

SAMPLE RESULTS

Lab ID:	L1424443-01	D	Date Collected:	10/14/14 09:55
Client ID:	MW-N2_101414		Date Received:	10/15/14
Sample Location:	650 WEST 42ND STREET		Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acetophenone	10	J	ug/l	25	2.1	5
2,4,6-Trichlorophenol	ND		ug/l	25	3.9	5
P-Chloro-M-Cresol	ND		ug/l	10	2.7	5
2-Chlorophenol	ND		ug/l	10	2.9	5
2,4-Dichlorophenol	ND		ug/l	25	2.8	5
2,4-Dimethylphenol	25		ug/l	25	2.9	5
2-Nitrophenol	ND		ug/l	50	5.2	5
4-Nitrophenol	ND		ug/l	50	5.4	5
2,4-Dinitrophenol	ND		ug/l	100	7.0	5
4,6-Dinitro-o-cresol	ND		ug/l	50	6.8	5
Phenol	15	J	ug/l	25	1.4	5
2-Methylphenol	34		ug/l	25	3.5	5
3-Methylphenol/4-Methylphenol	51		ug/l	25	3.6	5
2,4,5-Trichlorophenol	ND		ug/l	25	3.7	5
Benzoic Acid	ND		ug/l	250	5.0	5
Benzyl Alcohol	ND		ug/l	10	3.4	5
Carbazole	100		ug/l	10	1.9	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		21-120
Phenol-d6	37		10-120
Nitrobenzene-d5	100		23-120
2-Fluorobiphenyl	92		15-120
2,4,6-Tribromophenol	74		10-120
4-Terphenyl-d14	87		41-149

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

SAMPLE RESULTS

Lab ID:	L1424443-01	D	Date Collected:	10/14/14 09:55
Client ID:	MW-N2_101414		Date Received:	10/15/14
Sample Location:	650 WEST 42ND STREET		Field Prep:	Not Specified
Matrix:	Water		Extraction Method:	EPA 3510C
Analytical Method:	1,8270D-SIM		Extraction Date:	10/18/14 11:41
Analytical Date:	10/22/14 10:06			
Analyst:	MW			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	110		ug/l	4.0	1.3	20
2-Chloronaphthalene	ND		ug/l	4.0	1.3	20
Fluoranthene	37		ug/l	4.0	0.86	20
Hexachlorobutadiene	ND		ug/l	10	1.4	20
Naphthalene	2800	E	ug/l	4.0	1.3	20
Benzo(a)anthracene	10		ug/l	4.0	1.1	20
Benzo(a)pyrene	7.8		ug/l	4.0	1.4	20
Benzo(b)fluoranthene	12		ug/l	4.0	1.4	20
Benzo(k)fluoranthene	4.2		ug/l	4.0	1.4	20
Chrysene	7.9		ug/l	4.0	0.98	20
Acenaphthylene	9.3		ug/l	4.0	1.0	20
Anthracene	11		ug/l	4.0	1.3	20
Benzo(ghi)perylene	6.0		ug/l	4.0	1.4	20
Fluorene	41		ug/l	4.0	1.1	20
Phenanthrene	75		ug/l	4.0	1.3	20
Dibenzo(a,h)anthracene	ND		ug/l	4.0	1.5	20
Indeno(1,2,3-cd)Pyrene	6.5		ug/l	4.0	1.6	20
Pyrene	28		ug/l	4.0	1.1	20
2-Methylnaphthalene	75		ug/l	4.0	1.2	20
Pentachlorophenol	ND		ug/l	16	3.7	20
Hexachlorobenzene	ND		ug/l	16	0.28	20
Hexachloroethane	ND		ug/l	16	1.3	20

Project Name: RIVER PLACE I + II

Lab Number: L1424443

Project Number: 170040901

Report Date: 10/23/14

SAMPLE RESULTS

Lab ID:	L1424443-01	D	Date Collected:	10/14/14 09:55
Client ID:	MW-N2_101414		Date Received:	10/15/14
Sample Location:	650 WEST 42ND STREET		Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	0	Q	21-120
Phenol-d6	0	Q	10-120
Nitrobenzene-d5	0	Q	23-120
2-Fluorobiphenyl	0	Q	15-120
2,4,6-Tribromophenol	0	Q	10-120
4-Terphenyl-d14	0	Q	41-149

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-02 D
Client ID: MW-S2_101414
Sample Location: 650 WEST 42ND STREET
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 10/22/14 22:20
Analyst: PS

Date Collected: 10/14/14 12:55
Date Received: 10/15/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/18/14 11:39

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	25	1.0	5
Bis(2-chloroethyl)ether	ND		ug/l	10	2.0	5
1,2-Dichlorobenzene	ND		ug/l	10	1.5	5
1,3-Dichlorobenzene	ND		ug/l	10	1.8	5
1,4-Dichlorobenzene	ND		ug/l	10	1.6	5
3,3'-Dichlorobenzidine	ND		ug/l	25	2.4	5
2,4-Dinitrotoluene	ND		ug/l	25	5.2	5
2,6-Dinitrotoluene	ND		ug/l	25	4.4	5
4-Chlorophenyl phenyl ether	ND		ug/l	10	1.8	5
4-Bromophenyl phenyl ether	ND		ug/l	10	2.1	5
Bis(2-chloroisopropyl)ether	ND		ug/l	10	3.0	5
Bis(2-chloroethoxy)methane	ND		ug/l	25	3.0	5
Hexachlorocyclopentadiene	ND		ug/l	100	2.9	5
Isophorone	ND		ug/l	25	3.9	5
Nitrobenzene	ND		ug/l	10	2.0	5
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	10	1.7	5
n-Nitrosodi-n-propylamine	ND		ug/l	25	3.2	5
Bis(2-Ethylhexyl)phthalate	ND		ug/l	15	4.6	5
Butyl benzyl phthalate	ND		ug/l	25	5.6	5
Di-n-butylphthalate	ND		ug/l	25	3.8	5
Di-n-octylphthalate	ND		ug/l	25	6.0	5
Diethyl phthalate	ND		ug/l	25	2.0	5
Dimethyl phthalate	ND		ug/l	25	1.7	5
Biphenyl	ND		ug/l	10	1.2	5
4-Chloroaniline	ND		ug/l	25	4.2	5
2-Nitroaniline	ND		ug/l	25	4.8	5
3-Nitroaniline	ND		ug/l	25	3.3	5
4-Nitroaniline	ND		ug/l	25	4.2	5
Dibenzofuran	11		ug/l	10	1.1	5
1,2,4,5-Tetrachlorobenzene	ND		ug/l	50	1.8	5



Project Name: RIVER PLACE I + II

Lab Number: L1424443

Project Number: 170040901

Report Date: 10/23/14

SAMPLE RESULTS

Lab ID:	L1424443-02	D	Date Collected:	10/14/14 12:55
Client ID:	MW-S2_101414		Date Received:	10/15/14
Sample Location:	650 WEST 42ND STREET		Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acetophenone	ND	ug/l	25	2.1	5	
2,4,6-Trichlorophenol	ND	ug/l	25	3.9	5	
P-Chloro-M-Cresol	ND	ug/l	10	2.7	5	
2-Chlorophenol	ND	ug/l	10	2.9	5	
2,4-Dichlorophenol	ND	ug/l	25	2.8	5	
2,4-Dimethylphenol	ND	ug/l	25	2.9	5	
2-Nitrophenol	ND	ug/l	50	5.2	5	
4-Nitrophenol	ND	ug/l	50	5.4	5	
2,4-Dinitrophenol	ND	ug/l	100	7.0	5	
4,6-Dinitro-o-cresol	ND	ug/l	50	6.8	5	
Phenol	ND	ug/l	25	1.4	5	
2-Methylphenol	ND	ug/l	25	3.5	5	
3-Methylphenol/4-Methylphenol	ND	ug/l	25	3.6	5	
2,4,5-Trichlorophenol	ND	ug/l	25	3.7	5	
Benzoic Acid	ND	ug/l	250	5.0	5	
Benzyl Alcohol	ND	ug/l	10	3.4	5	
Carbazole	12	ug/l	10	1.9	5	

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	10	Q	21-120
Phenol-d6	18		10-120
Nitrobenzene-d5	89		23-120
2-Fluorobiphenyl	82		15-120
2,4,6-Tribromophenol	12		10-120
4-Terphenyl-d14	83		41-149

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

SAMPLE RESULTS

Lab ID:	L1424443-02	D	Date Collected:	10/14/14 12:55
Client ID:	MW-S2_101414		Date Received:	10/15/14
Sample Location:	650 WEST 42ND STREET		Field Prep:	Not Specified
Matrix:	Water		Extraction Method:	EPA 3510C
Analytical Method:	1,8270D-SIM		Extraction Date:	10/18/14 11:41
Analytical Date:	10/22/14 13:00			
Analyst:	MW			

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	34		ug/l	0.40	0.13	2
2-Chloronaphthalene	ND		ug/l	0.40	0.13	2
Fluoranthene	12		ug/l	0.40	0.09	2
Hexachlorobutadiene	ND		ug/l	1.0	0.14	2
Naphthalene	19		ug/l	0.40	0.13	2
Benzo(a)anthracene	3.4		ug/l	0.40	0.11	2
Benzo(a)pyrene	2.6		ug/l	0.40	0.14	2
Benzo(b)fluoranthene	3.9		ug/l	0.40	0.14	2
Benzo(k)fluoranthene	1.2		ug/l	0.40	0.14	2
Chrysene	3.3		ug/l	0.40	0.10	2
Acenaphthylene	4.2		ug/l	0.40	0.10	2
Anthracene	5.8		ug/l	0.40	0.13	2
Benzo(ghi)perylene	2.3		ug/l	0.40	0.14	2
Fluorene	6.1		ug/l	0.40	0.11	2
Phenanthrene	25		ug/l	0.40	0.13	2
Dibenzo(a,h)anthracene	0.50		ug/l	0.40	0.15	2
Indeno(1,2,3-cd)Pyrene	2.1		ug/l	0.40	0.16	2
Pyrene	18		ug/l	0.40	0.11	2
2-Methylnaphthalene	1.7		ug/l	0.40	0.12	2
Pentachlorophenol	ND		ug/l	1.6	0.37	2
Hexachlorobenzene	ND		ug/l	1.6	0.03	2
Hexachloroethane	ND		ug/l	1.6	0.13	2

Project Name: RIVER PLACE I + II

Lab Number: L1424443

Project Number: 170040901

Report Date: 10/23/14

SAMPLE RESULTS

Lab ID:	L1424443-02	D	Date Collected:	10/14/14 12:55
Client ID:	MW-S2_101414		Date Received:	10/15/14
Sample Location:	650 WEST 42ND STREET		Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	11	Q	21-120
Phenol-d6	18		10-120
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	78		15-120
2,4,6-Tribromophenol	13		10-120
4-Terphenyl-d14	83		41-149

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/21/14 11:51
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 10/18/14 11:39

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s):	01-02			Batch:	WG732360-1
Acenaphthene	ND		ug/l	2.0	0.28
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21
Hexachlorobenzene	ND		ug/l	2.0	0.40
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41
2-Chloronaphthalene	ND		ug/l	2.0	0.46
1,2-Dichlorobenzene	ND		ug/l	2.0	0.30
1,3-Dichlorobenzene	ND		ug/l	2.0	0.35
1,4-Dichlorobenzene	ND		ug/l	2.0	0.32
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89
Fluoranthene	ND		ug/l	2.0	0.40
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60
Hexachlorobutadiene	ND		ug/l	2.0	0.42
Hexachlorocyclopentadiene	ND		ug/l	20	0.58
Hexachloroethane	ND		ug/l	2.0	0.30
Isophorone	ND		ug/l	5.0	0.79
Naphthalene	ND		ug/l	2.0	0.33
Nitrobenzene	ND		ug/l	2.0	0.40
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.34
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	0.93
Butyl benzyl phthalate	ND		ug/l	5.0	1.1
Di-n-butylphthalate	ND		ug/l	5.0	0.77
Di-n-octylphthalate	ND		ug/l	5.0	1.2
Diethyl phthalate	ND		ug/l	5.0	0.39



Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/21/14 11:51
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 10/18/14 11:39

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s):	01-02			Batch:	WG732360-1
Dimethyl phthalate	ND		ug/l	5.0	0.33
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.66
Benzo(b)fluoranthene	ND		ug/l	2.0	0.37
Benzo(k)fluoranthene	ND		ug/l	2.0	0.30
Chrysene	ND		ug/l	2.0	0.30
Acenaphthylene	ND		ug/l	2.0	0.37
Anthracene	ND		ug/l	2.0	0.20
Benzo(ghi)perylene	ND		ug/l	2.0	0.57
Fluorene	ND		ug/l	2.0	0.32
Phenanthrene	ND		ug/l	2.0	0.23
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.44
Indeno(1,2,3-cd)Pyrene	ND		ug/l	2.0	0.43
Pyrene	ND		ug/l	2.0	0.52
Biphenyl	ND		ug/l	2.0	0.24
4-Chloroaniline	ND		ug/l	5.0	0.84
2-Nitroaniline	ND		ug/l	5.0	0.96
3-Nitroaniline	ND		ug/l	5.0	0.67
4-Nitroaniline	ND		ug/l	5.0	0.83
Dibenzofuran	ND		ug/l	2.0	0.22
2-Methylnaphthalene	ND		ug/l	2.0	0.36
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.36
Acetophenone	ND		ug/l	5.0	0.43
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78
P-Chloro-M-Cresol	ND		ug/l	2.0	0.54
2-Chlorophenol	ND		ug/l	2.0	0.58
2,4-Dichlorophenol	ND		ug/l	5.0	0.56
2,4-Dimethylphenol	ND		ug/l	5.0	0.58
2-Nitrophenol	ND		ug/l	10	1.0



Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/21/14 11:51
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 10/18/14 11:39

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s):	01-02			Batch:	WG732360-1
4-Nitrophenol	ND		ug/l	10	1.1
2,4-Dinitrophenol	ND		ug/l	20	1.4
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4
Pentachlorophenol	ND		ug/l	10	3.2
Phenol	ND		ug/l	5.0	0.27
2-Methylphenol	ND		ug/l	5.0	0.70
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.75
Benzoic Acid	ND		ug/l	50	1.0
Benzyl Alcohol	ND		ug/l	2.0	0.68
Carbazole	ND		ug/l	2.0	0.37

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		21-120
Phenol-d6	34		10-120
Nitrobenzene-d5	83		23-120
2-Fluorobiphenyl	75		15-120
2,4,6-Tribromophenol	71		10-120
4-Terphenyl-d14	90		41-149

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 10/21/14 09:40
Analyst: MW

Extraction Method: EPA 3510C
Extraction Date: 10/18/14 11:41

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s):	01-02		Batch:	WG732362-1	
Acenaphthene	ND		ug/l	0.20	0.06
2-Chloronaphthalene	ND		ug/l	0.20	0.07
Fluoranthene	ND		ug/l	0.20	0.04
Hexachlorobutadiene	ND		ug/l	0.50	0.07
Naphthalene	ND		ug/l	0.20	0.06
Benzo(a)anthracene	ND		ug/l	0.20	0.06
Benzo(a)pyrene	ND		ug/l	0.20	0.07
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07
Chrysene	ND		ug/l	0.20	0.05
Acenaphthylene	ND		ug/l	0.20	0.05
Anthracene	ND		ug/l	0.20	0.06
Benzo(ghi)perylene	ND		ug/l	0.20	0.07
Fluorene	ND		ug/l	0.20	0.06
Phenanthrene	ND		ug/l	0.20	0.06
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20	0.08
Pyrene	ND		ug/l	0.20	0.06
2-Methylnaphthalene	ND		ug/l	0.20	0.06
Pentachlorophenol	ND		ug/l	0.80	0.19
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.07

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 10/21/14 09:40
Analyst: MW

Extraction Method: EPA 3510C
Extraction Date: 10/18/14 11:41

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG732362-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	36		21-120
Phenol-d6	30		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	70		15-120
2,4,6-Tribromophenol	80		10-120
4-Terphenyl-d14	76		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG732360-2 WG732360-3								
Acenaphthene	79		75		37-111	5		30
1,2,4-Trichlorobenzene	70		68		39-98	3		30
Hexachlorobenzene	85		83		40-140	2		30
Bis(2-chloroethyl)ether	75		76		40-140	1		30
2-Chloronaphthalene	83		80		40-140	4		30
1,2-Dichlorobenzene	61		57		40-140	7		30
1,3-Dichlorobenzene	63		56		40-140	12		30
1,4-Dichlorobenzene	60		59		36-97	2		30
3,3'-Dichlorobenzidine	56		54		40-140	4		30
2,4-Dinitrotoluene	94		92		24-96	2		30
2,6-Dinitrotoluene	92		91		40-140	1		30
Fluoranthene	89		90		40-140	1		30
4-Chlorophenyl phenyl ether	88		85		40-140	3		30
4-Bromophenyl phenyl ether	89		88		40-140	1		30
Bis(2-chloroisopropyl)ether	66		63		40-140	5		30
Bis(2-chloroethoxy)methane	83		79		40-140	5		30
Hexachlorobutadiene	66		63		40-140	5		30
Hexachlorocyclopentadiene	58		56		40-140	4		30
Hexachloroethane	60		50		40-140	18		30
Isophorone	87		82		40-140	6		30
Naphthalene	73		71		40-140	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG732360-2 WG732360-3								
Nitrobenzene	101		97		40-140	4		30
NitrosoDiPhenylAmine(NDPA)/DPA	72		71		40-140	1		30
n-Nitrosodi-n-propylamine	82		81		29-132	1		30
Bis(2-Ethylhexyl)phthalate	103		101		40-140	2		30
Butyl benzyl phthalate	99		98		40-140	1		30
Di-n-butylphthalate	96		94		40-140	2		30
Di-n-octylphthalate	109		105		40-140	4		30
Diethyl phthalate	94		90		40-140	4		30
Dimethyl phthalate	90		87		40-140	3		30
Benzo(a)anthracene	90		88		40-140	2		30
Benzo(a)pyrene	87		86		40-140	1		30
Benzo(b)fluoranthene	100		97		40-140	3		30
Benzo(k)fluoranthene	87		84		40-140	4		30
Chrysene	85		85		40-140	0		30
Acenaphthylene	79		79		45-123	0		30
Anthracene	76		77		40-140	1		30
Benzo(ghi)perylene	98		92		40-140	6		30
Fluorene	84		81		40-140	4		30
Phenanthrene	84		83		40-140	1		30
Dibenzo(a,h)anthracene	95		91		40-140	4		30
Indeno(1,2,3-cd)Pyrene	100		96		40-140	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG732360-2 WG732360-3								
Pyrene	86		85		26-127	1		30
Biphenyl	97		92			5		30
4-Chloroaniline	73		52		40-140	34	Q	30
2-Nitroaniline	96		92		52-143	4		30
3-Nitroaniline	63		55		25-145	14		30
4-Nitroaniline	73		76		51-143	4		30
Dibenzofuran	84		82		40-140	2		30
2-Methylnaphthalene	76		73		40-140	4		30
1,2,4,5-Tetrachlorobenzene	84		80		2-134	5		30
Acetophenone	83		82		39-129	1		30
2,4,6-Trichlorophenol	92		92		30-130	0		30
P-Chloro-M-Cresol	89		91		23-97	2		30
2-Chlorophenol	72		73		27-123	1		30
2,4-Dichlorophenol	90		89		30-130	1		30
2,4-Dimethylphenol	24	Q	19	Q	30-130	23		30
2-Nitrophenol	86		80		30-130	7		30
4-Nitrophenol	65		68		10-80	5		30
2,4-Dinitrophenol	92		90		20-130	2		30
4,6-Dinitro-o-cresol	92		90		20-164	2		30
Pentachlorophenol	72		82		9-103	13		30
Phenol	37		37		12-110	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG732360-2 WG732360-3								
2-Methylphenol	49		52		30-130	6		30
3-Methylphenol/4-Methylphenol	59		63		30-130	7		30
2,4,5-Trichlorophenol	95		94		30-130	1		30
Benzoic Acid	21		26			21		30
Benzyl Alcohol	69		66			4		30
Carbazole	86		85		55-144	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	55		61		21-120
Phenol-d6	41		46		10-120
Nitrobenzene-d5	107		103		23-120
2-Fluorobiphenyl	91		90		15-120
2,4,6-Tribromophenol	86		88		10-120
4-Terphenyl-d14	96		93		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG732362-2 WG732362-3								
Acenaphthene	71		76		37-111	7		40
2-Chloronaphthalene	82		81		40-140	1		40
Fluoranthene	91		91		40-140	0		40
Hexachlorobutadiene	67		67		40-140	0		40
Naphthalene	71		75		40-140	5		40
Benzo(a)anthracene	92		90		40-140	2		40
Benzo(a)pyrene	88		82		40-140	7		40
Benzo(b)fluoranthene	104		96		40-140	8		40
Benzo(k)fluoranthene	94		93		40-140	1		40
Chrysene	84		80		40-140	5		40
Acenaphthylene	68		68		40-140	0		40
Anthracene	77		77		40-140	0		40
Benzo(ghi)perylene	96		93		40-140	3		40
Fluorene	83		85		40-140	2		40
Phenanthrene	75		76		40-140	1		40
Dibenzo(a,h)anthracene	99		100		40-140	1		40
Indeno(1,2,3-cd)Pyrene	101		96		40-140	5		40
Pyrene	89		90		26-127	1		40
2-Methylnaphthalene	81		82		40-140	1		40
Pentachlorophenol	70		76		9-103	8		40
Hexachlorobenzene	74		75		40-140	1		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> <i>Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> <i>Limits</i>
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG732362-2 WG732362-3								
Hexachloroethane	70		73		40-140	4		40

Surrogate	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
2-Fluorophenol	39		41		21-120
Phenol-d6	34		35		10-120
Nitrobenzene-d5	83		84		23-120
2-Fluorobiphenyl	88		83		15-120
2,4,6-Tribromophenol	85		82		10-120
4-Terphenyl-d14	87		87		41-149

METALS



Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-01 Date Collected: 10/14/14 09:55
Client ID: MW-N2_101414 Date Received: 10/15/14
Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	0.218		mg/l	0.010	0.002	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Antimony, Total	0.0006		mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Arsenic, Total	0.0045		mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Barium, Total	0.2165		mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		mg/l	0.0005	0.0002	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		mg/l	0.0002	0.0001	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Calcium, Total	204		mg/l	2.00	0.640	20	10/21/14 16:54	10/22/14 16:33	EPA 3005A	1,6020A	BM
Chromium, Total	0.0022		mg/l	0.0010	0.0003	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Cobalt, Total	0.0085		mg/l	0.0002	0.0001	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Copper, Total	0.0008	J	mg/l	0.0010	0.0003	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Iron, Total	2.87		mg/l	0.050	0.012	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Lead, Total	0.0023		mg/l	0.0010	0.0001	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Magnesium, Total	63.4		mg/l	1.40	0.446	20	10/21/14 16:54	10/22/14 16:33	EPA 3005A	1,6020A	BM
Manganese, Total	0.4706		mg/l	0.0100	0.0060	20	10/21/14 16:54	10/22/14 16:33	EPA 3005A	1,6020A	BM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	10/16/14 11:30	10/20/14 18:55	EPA 7470A	1,7470A	AK
Nickel, Total	0.0016		mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Potassium, Total	28.0		mg/l	0.100	0.019	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Selenium, Total	ND		mg/l	0.005	0.001	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Silver, Total	ND		mg/l	0.0003	0.0001	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Sodium, Total	172		mg/l	2.00	0.322	20	10/21/14 16:54	10/22/14 16:33	EPA 3005A	1,6020A	BM
Thallium, Total	ND		mg/l	0.0002	0.0001	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Vanadium, Total	0.0023	J	mg/l	0.0050	0.0006	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM
Zinc, Total	0.004	J	mg/l	0.0100	0.0026	1	10/21/14 16:54	10/22/14 16:27	EPA 3005A	1,6020A	BM



Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-02 Date Collected: 10/14/14 12:55
Client ID: MW-S2_101414 Date Received: 10/15/14
Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	9.71		mg/l	1.00	0.169	100	10/21/14 16:54	10/22/14 16:54	EPA 3005A	1,6020A	BM
Antimony, Total	0.0005		mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Arsenic, Total	0.0182		mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Barium, Total	0.3925		mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Beryllium, Total	0.0009		mg/l	0.0005	0.0002	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Cadmium, Total	0.0003		mg/l	0.0002	0.0001	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Calcium, Total	266		mg/l	2.00	0.640	20	10/21/14 16:54	10/22/14 16:46	EPA 3005A	1,6020A	BM
Chromium, Total	0.0255		mg/l	0.0010	0.0003	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Cobalt, Total	0.0135		mg/l	0.0002	0.0001	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Copper, Total	0.0446		mg/l	0.0010	0.0003	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Iron, Total	33.4		mg/l	0.050	0.012	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Lead, Total	0.3669		mg/l	0.0010	0.0001	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Magnesium, Total	95.5		mg/l	1.40	0.446	20	10/21/14 16:54	10/22/14 16:46	EPA 3005A	1,6020A	BM
Manganese, Total	1.074		mg/l	0.0100	0.0060	20	10/21/14 16:54	10/22/14 16:46	EPA 3005A	1,6020A	BM
Mercury, Total	0.00158		mg/l	0.00020	0.00006	1	10/16/14 11:30	10/20/14 18:57	EPA 7470A	1,7470A	AK
Nickel, Total	0.0221		mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Potassium, Total	23.9		mg/l	0.100	0.019	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Selenium, Total	0.0049	J	mg/l	0.0050	0.0010	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Silver, Total	0.0003		mg/l	0.0003	0.0001	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Sodium, Total	71.7		mg/l	2.00	0.322	20	10/21/14 16:54	10/22/14 16:46	EPA 3005A	1,6020A	BM
Thallium, Total	0.0001	J	mg/l	0.0002	0.0001	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Vanadium, Total	0.0445		mg/l	0.0050	0.0006	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM
Zinc, Total	0.1607		mg/l	0.0100	0.0026	1	10/21/14 16:54	10/22/14 16:42	EPA 3005A	1,6020A	BM



Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-02 Batch: WG731654-1									
Mercury, Total	ND	mg/l	0.00020	0.00006	1	10/16/14 11:30	10/20/14 18:05	1,7470A	AK

Prep Information

Digestion Method: EPA 7470A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst	
Total Metals - Westborough Lab for sample(s): 01-02 Batch: WG733087-1										
Aluminum, Total	0.010	mg/l	0.010	0.002	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Antimony, Total	ND	mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Arsenic, Total	ND	mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Barium, Total	0.0001	J	mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM
Beryllium, Total	ND	mg/l	0.0005	0.0002	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Cadmium, Total	ND	mg/l	0.0002	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Calcium, Total	ND	mg/l	0.100	0.032	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Chromium, Total	ND	mg/l	0.0010	0.0003	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Cobalt, Total	ND	mg/l	0.0002	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Copper, Total	ND	mg/l	0.0010	0.0003	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Iron, Total	ND	mg/l	0.050	0.012	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Lead, Total	ND	mg/l	0.0010	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Magnesium, Total	ND	mg/l	0.070	0.022	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Manganese, Total	ND	mg/l	0.0005	0.0003	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Nickel, Total	0.0001	J	mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM
Potassium, Total	0.035	J	mg/l	0.100	0.019	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM
Selenium, Total	ND	mg/l	0.005	0.001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Silver, Total	0.0001	J	mg/l	0.0003	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM
Sodium, Total	ND	mg/l	0.100	0.016	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Thallium, Total	ND	mg/l	0.0002	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Vanadium, Total	ND	mg/l	0.0050	0.0006	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	
Zinc, Total	ND	mg/l	0.0100	0.0026	1	10/21/14 16:54	10/22/14 16:07	1,6020A	BM	



Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 3005A



Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	LCS	LCSD	%Recovery		RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual			
Total Metals - Westborough Lab Associated sample(s): 01-02 Batch: WG731654-2							
Mercury, Total	106	-	-	80-120	-	-	-

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 Batch: WG733087-2					
Aluminum, Total	102	-	80-120	-	
Antimony, Total	92	-	80-120	-	
Arsenic, Total	98	-	80-120	-	
Barium, Total	93	-	80-120	-	
Beryllium, Total	96	-	80-120	-	
Cadmium, Total	98	-	80-120	-	
Calcium, Total	119	-	80-120	-	
Chromium, Total	92	-	80-120	-	
Cobalt, Total	100	-	80-120	-	
Copper, Total	95	-	80-120	-	
Iron, Total	102	-	80-120	-	
Lead, Total	93	-	80-120	-	
Magnesium, Total	104	-	80-120	-	
Manganese, Total	94	-	80-120	-	
Nickel, Total	94	-	80-120	-	
Potassium, Total	106	-	80-120	-	
Selenium, Total	110	-	80-120	-	
Silver, Total	93	-	80-120	-	
Sodium, Total	100	-	80-120	-	
Thallium, Total	88	-	80-120	-	
Vanadium, Total	93	-	80-120	-	

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 Batch: WG733087-2					
Zinc, Total	101	-	80-120	-	-

Matrix Spike Analysis
Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG731654-4 QC Sample: L1424301-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00414	83	-	-	-	-	75-125	-	-	20

Matrix Spike Analysis
Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG733087-4 QC Sample: L1424443-01 Client ID: MW-N2_101414									
Aluminum, Total	0.218	2	2.50	114	-	-	75-125	-	20
Antimony, Total	0.0006	0.5	0.5373	107	-	-	75-125	-	20
Arsenic, Total	0.0045	0.12	0.1363	110	-	-	75-125	-	20
Barium, Total	0.2165	2	2.317	105	-	-	75-125	-	20
Beryllium, Total	ND	0.05	0.0567	113	-	-	75-125	-	20
Cadmium, Total	ND	0.051	0.0562	110	-	-	75-125	-	20
Calcium, Total	204.	10	254	500	Q	-	75-125	-	20
Chromium, Total	0.0022	0.2	0.2168	107	-	-	75-125	-	20
Cobalt, Total	0.0085	0.5	0.5656	111	-	-	75-125	-	20
Copper, Total	0.0008J	0.25	0.2528	101	-	-	75-125	-	20
Iron, Total	2.87	1	4.72	185	Q	-	75-125	-	20
Lead, Total	0.0023	0.51	0.5505	107	-	-	75-125	-	20
Magnesium, Total	63.4	10	85.6	222	Q	-	75-125	-	20
Manganese, Total	0.4706	0.5	1.093	124	-	-	75-125	-	20
Nickel, Total	0.0016	0.5	0.5437	108	-	-	75-125	-	20
Potassium, Total	28.0	10	42.8	148	Q	-	75-125	-	20
Selenium, Total	ND	0.12	0.140	117	-	-	75-125	-	20
Silver, Total	ND	0.05	0.0509	102	-	-	75-125	-	20
Sodium, Total	172.	10	226	540	Q	-	75-125	-	20
Thallium, Total	ND	0.12	0.1229	102	-	-	75-125	-	20
Vanadium, Total	0.0023J	0.5	0.5423	108	-	-	75-125	-	20

Matrix Spike Analysis
Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG733087-4 QC Sample: L1424443-01 Client ID: MW-N2_101414									
Zinc, Total	0.004J	0.5	0.5732	115	-	-	75-125	-	20

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L1424443
Report Date: 10/23/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG731654-3 QC Sample: L1424301-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG733087-3 QC Sample: L1424443-01 Client ID: MW-N2_101414					
Aluminum, Total	0.218	0.240	mg/l	10	20
Antimony, Total	0.0006	0.0005	mg/l	9	20
Arsenic, Total	0.0045	0.0049	mg/l	8	20
Barium, Total	0.2165	0.2425	mg/l	11	20
Beryllium, Total	ND	ND	mg/l	NC	20
Cadmium, Total	ND	ND	mg/l	NC	20
Chromium, Total	0.0022	0.0022	mg/l	0	20
Cobalt, Total	0.0085	0.0094	mg/l	11	20
Copper, Total	0.0008J	0.0008J	mg/l	NC	20
Iron, Total	2.87	3.13	mg/l	9	20
Lead, Total	0.0023	0.0026	mg/l	14	20
Nickel, Total	0.0016	0.0021	mg/l	24	Q 20
Potassium, Total	28.0	31.2	mg/l	11	20
Selenium, Total	ND	ND	mg/l	NC	20
Silver, Total	ND	ND	mg/l	NC	20
Thallium, Total	ND	ND	mg/l	NC	20
Vanadium, Total	0.0023J	0.0030J	mg/l	NC	20
Zinc, Total	0.004J	0.0044J	mg/l	NC	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG733087-3 QC Sample: L1424443-01 Client ID: MW-N2_101414					
Calcium, Total	204.	230	mg/l	12	20
Magnesium, Total	63.4	64.6	mg/l	2	20
Manganese, Total	0.4706	0.4922	mg/l	4	20
Sodium, Total	172.	181	mg/l	5	20

INORGANICS & MISCELLANEOUS



Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-01
Client ID: MW-N2_101414
Sample Location: 650 WEST 42ND STREET
Matrix: Water

Date Collected: 10/14/14 09:55
Date Received: 10/15/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	1.00		mg/l	0.025	0.006	5	10/16/14 07:00	10/20/14 13:05	1,9010C/9012B	JO
Cyanide, Physiologically Available	0.093		mg/l	0.005	0.00005	1	10/20/14 09:32	10/20/14 16:37	64,9014(M)	JO

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-02
Client ID: MW-S2_101414
Sample Location: 650 WEST 42ND STREET
Matrix: Water

Date Collected: 10/14/14 12:55
Date Received: 10/15/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	1.38		mg/l	0.025	0.006	5	10/16/14 07:00	10/20/14 13:07	1,9010C/9012B	JO
Cyanide, Physiologically Available	0.327		mg/l	0.005	0.00005	1	10/20/14 09:32	10/20/14 16:37	64,9014(M)	JO

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis
Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG731538-1									
Cyanide, Total	0.001	J	mg/l	0.005	0.001	1	10/16/14 07:00	10/20/14 12:42	1,9010C/9012B
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG732547-1									
Cyanide, Physiologically Available	ND		mg/l	0.005	0.00005	1	10/20/14 09:32	10/20/14 16:34	64,9014(M)



Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG731538-2 WG731538-3								
Cyanide, Total	100		103		80-120	3		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG732547-2								
Cyanide, Physiologically Available	93		-		80-120	-		
General Chemistry - Westborough Lab NEGATIVE LCS Associated sample(s): 01-02 Batch: WG732547-4								
Cyanide, Physiologically Available	1		-		0-10	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG731538-4 WG731538-5 QC Sample: L1424443-01 Client ID: MW-N2_101414												
Cyanide, Total	1.00	0.2	1.19	90		1.18	90		80-120	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG732547-5 QC Sample: L1424443-02 Client ID: MW-S2_101414												
Cyanide, Physiologically Available	0.327	0.2	0.486	80	-	-	-	-	75-125	-		20

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L1424443
Report Date: 10/23/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG732547-6 QC Sample: L1424443-02 Client ID: MW-S2_101414						
Cyanide, Physiologically Available	0.327	0.285	mg/l	14		20

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1424443-01A	Plastic 500ml HNO3 preserved	A	<2	2.2	Y	Absent	BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),CA-6020T(180),CR-6020T(180),K-6020T(180),NI-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)
L1424443-01B	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1424443-01C	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1424443-01D	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1424443-01E	Amber 1000ml unpreserved	A	7	2.2	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1424443-01F	Amber 1000ml unpreserved	A	7	2.2	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1424443-01G	Plastic 250ml NaOH preserved	A	>12	2.2	Y	Absent	TCN-9010(14),PACN(14)
L1424443-01G1	Plastic 250ml NaOH preserved	A	>12	2.2	Y	Absent	TCN-9010(14),PACN(14)
L1424443-02A	Plastic 500ml HNO3 preserved	A	<2	2.2	Y	Absent	BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),CA-6020T(180),CR-6020T(180),K-6020T(180),NI-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)
L1424443-02B	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1424443-02C	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1424443-02D	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1424443-02E	Amber 1000ml unpreserved	A	7	2.2	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)

*Values in parentheses indicate holding time in days

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1424443-02F	Amber 1000ml unpreserved	A	7	2.2	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1424443-02G	Plastic 250ml NaOH preserved	A	>12	2.2	Y	Absent	TCN-9010(14),PACN(14)
L1424443-02G1	Plastic 250ml NaOH preserved	A	>12	2.2	Y	Absent	TCN-9010(14),PACN(14)
L1424443-03A	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1424443-03B	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1424443-03C	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

GLOSSARY

Acronyms

- EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
- EPA - Environmental Protection Agency.
- LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
- LCSD - Laboratory Control Sample Duplicate: Refer to LCS.
- LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
- MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
- MSD - Matrix Spike Sample Duplicate: Refer to MS.
- NA - Not Applicable.
- NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
- NI - Not Ignitable.
- RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
- SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A - Spectra identified as "Aldol Condensation Product".
- B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

Report Format: DU Report with 'J' Qualifiers



Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

Data Qualifiers

- G** - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedances are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



Project Name: RIVER PLACE I + II
Project Number: 170040901

Lab Number: L1424443
Report Date: 10/23/14

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 64 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). August 2004.

LIMITATION OF LIABILITIES

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We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

Last revised April 15, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility

EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pantanone (MIBK), Carbon disulfide, Diethyl ether.

EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.

EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 625: 4-Chloroaniline, 4-Methylphenol.

SM4500: Soil: Total Phosphorus, TKN, NO₂, NO₃.

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

EPA 332: Perchlorate.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water

EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC,

SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, **SM4500NO3-F,**

EPA 353.2: Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4,**

SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2014
Issued April 01, 2013



CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State.

MR. CHRISTOPHER WAKEFIELD
ALPHA ANALYTICAL
8 WALKUP DR
WESTBOROUGH, MA 01581-1019

NY Lab Id No. 11148

is hereby APPROVED as an Environmental Laboratory in performance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES POTABLE WATER

All approved analytes are listed below:

Drinking Water Bacteriology

Coliform, Total / E. coli (Qualitative)

SM 18-21 9222B(97)/40CFR141.21(F)6t Beryllium, Total

EPA 200.7 Rev. 4.4

Standard Plate Count

SM 18-21 9223B (97) (Coliform)

EPA 200.5 Rev. 5.4

Drinking Water Metals I

Arsenic, Total

EPA 200.8 Rev. 5.4

EPA 200.7 Rev. 4.4

Barium, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

Cadmium, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

Chromium, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

Copper, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

Iron, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

Lead, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

Manganese, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

Mercury, Total

EPA 245.1 Rev. 3.0

EPA 300.0 Rev. 2.1

Selenium, Total

EPA 200.8 Rev. 5.4

SM 18-21 2120B (01)

Silver, Total

EPA 200.7 Rev. 4.4

SM 18-21 4500-CN E (99)

Zinc, Total

EPA 200.8 Rev. 5.4

EPA 300.0 Rev. 2.1

Drinking Water Metals II

Aluminum, Total

EPA 200.7 Rev. 4.4

SM 18-21 4500-F O (97)

Antimony, Total

EPA 200.8 Rev. 5.4

SM 18-21 4500-NO3 F (00)

Drinking Water Metals II

Beryllium, Total

EPA 200.5 Rev. 5.4

Nickel, Total

EPA 200.7 Rev. 4.4

Thallium, Total

EPA 200.8 Rev. 5.4

Drinking Water Metals III

Calcium, Total

EPA 200.7 Rev. 4.4

Magnesium, Total

EPA 200.7 Rev. 4.4

Sodium, Total

EPA 200.7 Rev. 4.4

Drinking Water Miscellaneous

Organic Carbon, Total

SM 18-21 5310C (00)

Perchlorate

EPA 332.0 Rev. 1

Drinking Water Non-Metals

Alkalinity

SM 18-21 2320B (97)

Calcium Hardness

EPA 200.7 Rev. 4.4

Chloride

EPA 300.0 Rev. 2.1

Color

SM 18-21 2120B (01)

Cyanide

SM 18-21 4500-CN E (99)

Fluoride, Total

EPA 300.0 Rev. 2.1

Nitrate (as N)

SM 18-21 4500-NO3 F (00)

Nitrite (as N)

SM 18-21 4500-NO3 F (97)

Solids, Total Dissolved

SM 18-21 2540C (97)

Specific Conductance

SM 18-21 2510B (97)

Serial No.: 48541

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ENVIRONMENTAL ANALYSES POTABLE WATER

All approved analytes are listed below.

Drinking Water Non-Metals

Sulfate (as SO₄) EPA 300.0 Rev. 2.1

Drinking Water Trihalomethanes

Bromodichloromethane EPA 524.2
Bromoform EPA 524.2
Chloroform EPA 524.2
Dibromochloromethane EPA 524.2
Total Trihalomethanes EPA 524.2

Fuel Additives

Methyl tert-butyl ether EPA 524.2
Naphthalene EPA 524.2

Microextractibles

4,2-Dibromo-3-chloropropane EPA 504.1
1,2-Dibromoethane EPA 504.1

Volatile Aromatics

1,2,3-Trichlorobenzene EPA 524.2
1,2,4-Trichlorobenzene EPA 524.2
1,2,4-Trimethylbenzene EPA 524.2
1,2-Dichlorobenzene EPA 524.2
1,3,5-Trimethylbenzene EPA 524.2
1,3-Dichlorobenzene EPA 524.2
1,4-Dichlorobenzene EPA 524.2
2-Chlorotoluene EPA 524.2
4-Chlorotoluene EPA 524.2
Benzene EPA 524.2

Volatile Aromatics

Bromobenzene EPA 524.2
Chlorobenzene EPA 524.2
Ethyl benzene EPA 524.2
Hexachlorobutadiene EPA 524.2
Isopropylbenzene EPA 524.2
n-Butylbenzene EPA 524.2
n-Propylbenzene EPA 524.2
p-Isopropyltoluene (P-Cymene) EPA 524.2
sec-Butylbenzene EPA 524.2
Styrene EPA 524.2
tert-Butylbenzene EPA 524.2
Toluene EPA 524.2

Total Xylenes

EPA 524.2

Volatile Halocarbons

1,1,1,2-Tetrachloroethane EPA 524.2
1,1,1-Trichloroethane EPA 524.2
1,1,2,2-Tetrachloroethane EPA 524.2
1,1,2-Trichloroethane EPA 524.2
1,1-Dichloroethane EPA 524.2
1,1-Dichloroethene EPA 524.2
1,1-Dichloropropane EPA 524.2
1,2,3-Trichloropropane EPA 524.2
1,2-Dichloroethane EPA 524.2
1,2-Dichloropropane EPA 524.2
1,3-Dichloropropane EPA 524.2

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MR. CHRISTOPHER WAKEFIELD
ALPHA ANALYTICAL
8 WALKUP DR.
WESTBOROUGH, MA 01581-1019

NY Lab Id No: 111148

is hereby APPROVED as an Environmental Laboratory in performance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES POTABLE WATER

All approved analytes are listed below.

Volatile Halocarbons

2,2-Dichloropropane	EPA 524.2
Bromoform	EPA 524.2
Bromomethane	EPA 524.2
Carbon tetrachloride	EPA 524.2
Chloroethane	EPA 524.2
Chloromethane	EPA 524.2
cis-1,2-Dichloroethene	EPA 524.2
cis-1,3-Dichloropropene	EPA 524.2
Dibromomethane	EPA 524.2
Dichlorodifluoromethane	EPA 524.2
Methylene chloride	EPA 524.2
Tetrachloroethene	EPA 524.2
trans-1,2-Dichloroethene	EPA 524.2
trans-1,3-Dichloropropene	EPA 524.2
Trichloroethene	EPA 524.2
Trichlorofluoromethane	EPA 524.2
Vinyl chloride	EPA 524.2

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WADSWORTH CENTER



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MR. CHRISTOPHER WAKEFIELD
ALPHA ANALYTICAL
8 WALKUP DR.
WESTBOROUGH, MA 01581-1019

NY Lab Id No. 11148

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below.

Acrylates

Acrolein (Propenal)

EPA 624

Benzidines

Benzidine

EPA 625

Acrylonitrile

EPA 624

EPA 8270D

Ethyl methacrylate

EPA 8260C

Chlorinated Hydrocarbon Pesticides

4,4'-DDD

EPA 608

Amines

2-Nitroaniline

EPA 8270D

4,4'-DDE

EPA 8081B

3-Nitroaniline

EPA 8270D

4,4'-DDT

EPA 608

4-Chloroaniline

EPA 8270D

Aldrin

EPA 8081B

4-Nitroaniline

EPA 8270D

alpha-BHC

EPA 608

Aniline

EPA 8270D

alpha-Chlordane

EPA 8081B

Carbazole

EPA 625

beta-BHC

EPA 608

Pyridine

EPA 625

Chlordane Total

EPA 8081B

EPA 8270D

delta-BHC

EPA 608

Bacteriology

Coliform, Fecal

SM 18-21 9221E (99)

EPA 8081B

SM 18-21 9222D (97)

EPA 608

Coliform, Total

SM 18-21 9221B (99)

EPA 608

SM 18-21 9222B (97)

EPA 8081B

Standard Plate Count

SM 18-21 9275B

Dieldrin

EPA 608

Benzidines

3,3'-Dichlorobenzidine

EPA 625

Endosulfan I

EPA 608

EPA 8270D

Endosulfan II

EPA 8081B

Serial No.: 48542

EPA 608

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ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below.

Chlorinated Hydrocarbon Pesticides

Endosulfan II	EPA 8081B
Endosulfan sulfate	EPA 808
Endrin	EPA 8081B
Endrin aldehyde	EPA 608
Endrin Ketone	EPA 8081B
gamma-Chlordane	EPA 8081B
Heptachlor	EPA 608
Heptachlor epoxide	EPA 8081B
Lindane	EPA 608
Methoxychlor	EPA 8081B
Toxaphene	EPA 608

Chlorinated Hydrocarbons

1,2,3-Trichlorobenzene	EPA 8260C
1,2,4,5-Tetrachlorobenzene	EPA 8270D
1,2,4-Trichlorobenzene	EPA 625
2-Chloronaphthalene	EPA 825

Chlorinated Hydrocarbons

2-Chloronaphthalene	EPA 8270D
Hexachlorobenzene	EPA 825
Hexachlorobutadiene	EPA 8270D
Hexachlorocyclopentadiene	EPA 825
Hexachloroethane	EPA 8270D

Chlorophenoxy Acid Pesticides

2,4,5-T	EPA 8151A
2,4,5-TP (Silvex)	EPA 8151A
2,4-D	EPA 8151A
Dalapon	EPA 8151A
Dinoseb	EPA 8151A

Demand

Biochemical Oxygen Demand	SM 18-21-5210B (01)
Carbonaceous BOD	SM 18-21-5220D (97)

Chemical Oxygen Demand

EPA 410.4 Rev. 2.0
SM 18-21-5220D (97)

Fuel Oxygenates

Di-isopropyl ether	EPA 8260C
Ethanol	EPA 8260C
Methyl tert-butyl ether	EPA 8260C

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Fuel Oxygenates

tert-amyl methyl ether (TAME)	EPA 8260C
tert-butyl alcohol	EPA 8260C
tert-butyl ethyl ether (ETBE)	EPA 8260C

Halocethers

4-Bromophenylphenyl ether	EPA 625
4-Chlorophenylphenyl ether	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 625
Bis(2-chloroethyl)ether	EPA 8270D
Bis(2-chloroisopropyl) ether	EPA 625

Low Level Polynuclear Aromatics

Benzo(a)anthracene Low Level	EPA 8270D SIM
Benzo(a)pyrene Low Level	EPA 8270D SIM
Benzo(b)fluoranthene Low Level	EPA 8270D SIM
Benzo(g,h,i)perylene Low Level	EPA 8270D SIM
Benzo(k)fluoranthene Low Level	EPA 8270D SIM
Chrysene Low Level	EPA 8270D SIM
Dibenzo(a,h)anthracene Low Level	EPA 8270D SIM
Fluoranthene Low Level	EPA 8270D SIM
Fluorene Low Level	EPA 8270D SIM
Indeno(1,2,3-ij)pyrene Low Level	EPA 8270D SIM

Low Level Polynuclear Aromatics

Naphthalene Low Level	EPA 8270D SIM
Mineral	
Acidity	SM 18-21 2310B-4a (97)
Alkalinity	SM 18-21 2320B (97)
Chloride	EPA 300.0 Rev. 2.1
Fluoride, Total	SM 18-21 4500-Cl- E (97)
Hardness, Total	EPA 300.0 Rev. 2.1
Sulfate (as SO4)	SM 18-21 4500-F-C (97)
Nitroaromatics and Isophorone	EPA 200.7 Rev. 4.4
1,3,5-Trinitrobenzene	EPA 300.0 Rev. 2.1
1,3-Dinitrobenzene	SM 18-21 2340B (97)
2,4,6-Trinitrotoluene	EPA 300.0 Rev. 2.1
2,4-Dinitrotoluene	SM 15-426-O
2,6-Dinitrotoluene	EPA 8330
1,3-Dinitrobenzene	EPA 8270D
2-Amino-4,6-dinitrotoluene	EPA 8330
2-Nitrotoluene	EPA 8330

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National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below:

Nitroaromatics and Isophorone

3-Nitrotoluene	EPA 8330
4-Amino-2,6-dinitrotoluene	EPA 8330
4-Nitrotoluene	EPA 8330
Hexahydro-1,3,5-trinitro-1,3,5-triazine	EPA 8330
Isophorone	EPA 625
Methyl-2,4,6-trinitrophenylnitramine	EPA 8330
Nitrobenzene	EPA 625
Octahydro-tetranitro-tetrazocine	EPA 8330

Nutrient

Nitrate (as N)	SM 18-21 4500-NO3 F (00)
Nitrite (as N)	SM 18-21 4500-NO2 B (00)
Orthophosphate (as P)	SM 18-21 4500-P E
Phosphorus, Total	SM 18-21 4500-P E

Nitrosoamines

N-Nitrosodimethylamine	EPA 625
N-Nitrosodi-n-propylamine	EPA 8270D
N-Nitrosodiphenylamine	EPA 625
	EPA 8270D

Organophosphate Pesticides

Atrazine	EPA 8270D
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Petroleum Hydrocarbons

Diesel Range Organics	EPA 8015C
Gasoline Range Organics	EPA 8015C

Phthalate Esters

Benzyl butyl phthalate	EPA 625
Bis(2-ethylhexyl) phthalate	EPA 625
Diethyl phthalate	EPA 8270D
Dimethyl phthalate	EPA 625
Di-n-butyl phthalate	EPA 8270D
Di-n-octyl phthalate	EPA 625
	EPA 8270D

Polychlorinated Biphenyls

PCB-1016	EPA 608
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ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below.

Polychlorinated Biphenyls

PCB-1016	EPA 8082A
PCB-1221	EPA 608
PCB-1232	EPA 8082A
PCB-1242	EPA 608
PCB-1248	EPA 8082A
PCB-1254	EPA 608
PCB-1260	EPA 8082A
PCB-1262	EPA 608
PCB-1268	EPA 8082A

Polynuclear Aromatics

Acenaphthene	EPA 625
Acenaphthylene	EPA 8270D
Anthracene	EPA 625
Benz(a)anthracene	EPA 8270D
Benz(a)pyrene	EPA 625

Polynuclear Aromatics

Benzo(a)pyrene	EPA 8270D
Benzo(b)fluoranthene	EPA 625
Benzo(ghi)perylene	EPA 8270D
Benzo(k)fluoranthene	EPA 625
Chrysene	EPA 8270D
Dibenz(a,h)anthracene	EPA 625
Fluoranthene	EPA 625
Fluorene	EPA 8270D
Indeno(1,2,3-c)pyrene	EPA 625
Naphthalene	EPA 8270D
Phenanthrene	EPA 625
Pyrene	EPA 8270D
Priority Pollutant Phenols	EPA 625
2,3,4,6 Tetrachlorophenol	EPA 8270D

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ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below:

Priority Pollutant Phenols

2,4,5-Trichlorophenol

EPA 625

2,4,6-Trichlorophenol

EPA 625

2,4-Dichlorophenol

EPA 625

2,4-Dimethylphenol

EPA 625

2,4-Dinitrophenol

EPA 625

2-Chlorophenol

EPA 625

2-Methyl-4,6-dinitrophenol

EPA 625

2-Methylnaphthalene

EPA 625

2-Nitrophenol

EPA 625

3-Methylnaphthalene

EPA 625

4-Chloro-3-methylphenol

EPA 625

4-Methylphenol

EPA 625

4-Nitrophenol

EPA 625

Pentachlorophenol

EPA 625

EPA 8270D

Priority Pollutant Phenols

Phenol

EPA 625

EPA 8270D

Residue

Solids, Total

SM 18-21 2540B (97)

Solids, Total Dissolved

SM 18-21 2540C (97)

Solids, Total Suspended

SM 18-21 2540D (97)

Semi-Volatile Organics

1,1-Biphenyl

EPA 8270D

1,2-Dichlorobenzene, Semi-volatile

EPA 8270D

1,3-Dichlorobenzene, Semi-volatile

EPA 8270D

1,4-Dichlorobenzene, Semi-volatile

EPA 8270D

2-Methylnaphthalene

EPA 8270D

Acetophenone

EPA 8270D

Benzaldehyde

EPA 8270D

Benzene Acid

EPA 8270D

Benzyl alcohol

EPA 8270D

Caprolactam

EPA 8270D

Dibenzofuran

EPA 8270D

Volatile Aromatics

1,2,4-Trichlorobenzene, volatile

EPA 8260C

2,4-Trimethylbenzene

EPA 8260C

1,2-Dichlorobenzene

EPA 624

1,3,5-Trimethylbenzene

EPA 8260C

Serial No.: 48542

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2014
Issued April 01, 2013



CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. CHRISTOPHER WAKEFIELD
ALPHA ANALYTICAL
8 WALKUP DR.
WESTBOROUGH, MA 01581-1019

NY Lab Id No: 11148

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below.

Volatile Aromatics

1,3-Dichlorobenzene

EPA 624

1,4-Dichlorobenzene

EPA 8260C

2-Chlorotoluene

EPA 624

4-Chlorotoluene

EPA 8260C

Benzene

EPA 624

EPA 8260C

Chlorobenzene

EPA 624

EPA 8260C

Ethylbenzene

EPA 624

EPA 8260C

Isopropylbenzene

EPA 6260C

Naphthalene, Volatile

EPA 8260C

n-Butylbenzene

EPA 8260C

n-Propylbenzene

EPA 8260C

p-Isopropyltoluene (P-Cymene)

EPA 8260C

sec-Butylbenzene

EPA 8260C

Styrene

EPA 624

EPA 8260C

tert-Butylbenzene

EPA 8260C

Toluene

EPA 624

EPA 8260C

Total Xylenes

EPA 624

EPA 8260C

Volatile Halocarbons

1,1,1,2-Tetrachloroethane

EPA 8260C

1,1,1-Trichloromethane

EPA 624

1,1,2,2-Tetrachloroethane

EPA 8260C

1,1,2-Trichloro-1,2,2-Trifluoroethane

EPA 8260C

1,1,2-Trichloroethane

EPA 624

EPA 8260C

1,1-Dichloroethane

EPA 624

1,1-Dichloroethene

EPA 8260C

1,1-Dichloropropane

EPA 8260C

1,2,3-Trichloropropane

EPA 8260C

1,2-Dibromo-3-chloropropane

EPA 8011

1,2-Dibromoethane

EPA 8260C

1,2-Dichloroethane

EPA 624

1,2-Dichloropropane

EPA 624

1,3-Dichloropropane

EPA 8260C

2,2-Dichloropropane

EPA 8260C

2-Chloroethylvinyl ether

EPA 624

EPA 8260C

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Volatile Halocarbons

Bromochloromethane	EPA 9260C	Methylene chloride	EPA 8260C
Bromodichloromethane	EPA 624	Tetrachloroethene	EPA 624
	EPA 8260C	trans-1,2-Dichloroethene	EPA 8260C
Bromoform	EPA 624	trans-1,3-Dichloropropene	EPA 624
	EPA 8260C	trans-1,4-Dichloro-2-butene	EPA 8260C
Bromomethane	EPA 624	Trichloroethene	EPA 624
	EPA 8260C	Trichlorofluoromethane	EPA 624
Carbon tetrachloride	EPA 924	Vinyl chloride	EPA 8260C
	EPA 8260C		EPA 624
Chloroethane	EPA 624		EPA 8260C
	EPA 8260C		EPA 624
Chloroform	EPA 624		EPA 8260C
	EPA 8260C		EPA 624
Chloromethane	EPA 624		EPA 8260C
	EPA 8260C		EPA 624
cis-1,2-Dichloroethene	EPA 624	1,4-Dioxane	EPA 8260C
	EPA 8260C	2-Butanone (Methyl ethyl ketone)	EPA 8260C
cis-1,3-Dichloropropene	EPA 624	2-Hexanone	EPA 8260C
	EPA 8260C	4-Methyl-2-Pentanone	EPA 8260C
Dibromochloromethane	EPA 624	Acetone	EPA 8260C
	EPA 8260C	Carbon Disulfide	EPA 8260C
Dibromomethane	EPA 8260C	Cyclohexane	EPA 8260C
Dichlorodifluoromethane	EPA 624	Diethyl ether	EPA 8260C
	EPA 8260C	Methyl acetate	EPA 8260C
Hexachlorobutadiene; volatile	EPA 8260C	Methyl cyclohexane	EPA 8260C
Methylene chloride	EPA 624		

Volatiles Organics

1,4-Dioxane	EPA 8260C
2-Butanone (Methyl ethyl ketone)	EPA 8260C
2-Hexanone	EPA 8260C
4-Methyl-2-Pentanone	EPA 8260C
Acetone	EPA 8260C
Carbon Disulfide	EPA 8260C
Cyclohexane	EPA 8260C
Diethyl ether	EPA 8260C
Methyl acetate	EPA 8260C
Methyl cyclohexane	EPA 8260C

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ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below

Volatiles Organics

Vinyl acetate

EPA 8280C

Wastewater Metals I

Barium, Total

EPA 200.7 Rev. 4.4

Wastewater Metals I

Lead, Total

EPA 6010C

EPA 6020A

EPA 200.7 Rev. 4.4

EPA 6010C

Cadmium, Total

EPA 200.7 Rev. 4.4

Magnesium, Total

EPA 200.7 Rev. 4.4

EPA 6010C

Calcium, Total

EPA 200.7 Rev. 4.4

Nickel, Total

EPA 200.7 Rev. 4.4

EPA 6010C

Chromium, Total

EPA 200.7 Rev. 4.4

Potassium, Total

EPA 200.7 Rev. 4.4

EPA 6010C

Copper, Total

EPA 200.7 Rev. 4.4

Silver, Total

EPA 200.7 Rev. 4.4

EPA 6010C

Iron, Total

EPA 200.7 Rev. 4.4

Sodium, Total

EPA 200.7 Rev. 4.4

EPA 6010C

Lead, Total

EPA 200.7 Rev. 4.4

Wastewater Metals II

EPA 200.7 Rev. 4.4

EPA 6010C

Aluminum, Total

EPA 200.8 Rev. 5.4

EPA 6020A

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Wastewater Metals II

Antimony, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

EPA 6010C

EPA 6020A

Arsenic, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

EPA 6010C

EPA 6020A

Beryllium, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

EPA 6010C

EPA 6020A

Chromium VI

EPA 7196A

SM 18-19 2500-Cr-D

Mercury, Total

EPA 245.1 Rev. 3.0

EPA 7470A

Selenium, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

EPA 6010C

EPA 6020A

Vanadium, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

EPA 6010C

EPA 6020A

Zinc, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

Wastewater Metals II

Zinc, Total

EPA 6010C

EPA 6020A

Wastewater Metals III

Cobalt, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

EPA 6010C

EPA 6020A

Molybdenum, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

EPA 6010C

EPA 6020A

Thallium, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

EPA 6010C

EPA 6020A

Tin, Total

EPA 200.7 Rev. 4.4

EPA 6010C

EPA 200.7 Rev. 4.4

Wastewater Miscellaneous

Boron, Total

EPA 200.7 Rev. 4.4

EPA 6010C

EPA 300.0 Rev. 2.1

SM 18-21 2120B (01)

Bromide

SM 18-21 4500-CN E (93)

Color

EPA 8315A

Cyanide, Total

Formaldehyde

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ENVIRONMENTAL ANALYSES NON POTABLE WATER.

All approved analytes are listed below.

Wastewater Miscellaneous

Oil and Grease Total Recoverable (HEM EPA 1664A)	
Organic Carbon, Total	SM 18-21 5310C (00)
Phenols	EPA 420.1 Rev. 1978
Silica, Dissolved	SM 14 510C
Specific Conductance	EPA 200.7 Rev. 4.4
Sulfide (as S)	EPA 120.1 Rev. 1982
Surfactant (MBAS)	SM 18-21 2510B (97)
Total Petroleum Hydrocarbons	SM 18-21 4500-S D (00)

Sample Preparation Methods

EPA 3005A
EPA 3015
EPA 3510C
EPA 5030B
EPA 9010C
EPA 9030B
SM 18-20 4500-CN C
SM 18-21 4500-NH3 B (97)

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WESTBOROUGH MA 01581-1019

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below.

Acrylates

Acrolein (Propenal)

EPA 8260C

Acrylonitrile

EPA 8260C

Ethyl methacrylate

EPA 8260C

Amines

1,2-Diphenylhydrazine

EPA 8270D

2-Nitroaniline

EPA 8270D

3-Nitroaniline

EPA 8270D

4-Chloroaniline

EPA 8270D

4-Nitroaniline

EPA 8270D

Aniline

EPA 8270D

Carbazole

EPA 8270D

Benzidines

3,3'-Dichlorobenzidine

EPA 8270D

Benzidine

EPA 8270D

Characteristic Testing

Corrosivity

EPA 9040C

Ignitability

EPA 9045D

EPA 1010A

EPA 1030

EPA 1312

EPA 1311

Synthetic Precipitation Leaching Proc.

TCLP

Chlorinated Hydrocarbon Pesticides

4,4'-DDD

EPA 8081B

4,4'-DDE

EPA 8081B

Chlorinated Hydrocarbon Pesticides

4,4'-DDT

EPA 8081B

Aldrin

EPA 8081B

alpha-BHC

EPA 8081B

alpha-Chlordane

EPA 8081B

Atrazine

EPA 8270D

beta-BHC

EPA 8081B

Chlordane Total

EPA 8081B

delta-BHC

EPA 8081B

Dieldrin

EPA 8081B

Endosulfan I

EPA 8081B

Endosulfan II

EPA 8081B

Endosulfan sulfate

EPA 8081B

Endrin

EPA 8081B

Endrin aldehyde

EPA 8081B

Endrin Ketone

EPA 8081B

gamma-Chlordane

EPA 8081B

Heptachlor

EPA 8081B

Heptachlor-epoxide

EPA 8081B

Lindane

EPA 8081B

Methoxychlor

EPA 8081B

Toxaphene

EPA 8081B

Chlorinated Hydrocarbons

1,2,3-Trichlorobenzene

EPA 8260C

1,2,4,5-Tetrachlorobenzene

EPA 8270D

1,2,4-Trichlorobenzene

EPA 8270D

Serial No.. 48543

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8 WALKUP DR
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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below:

Chlorinated Hydrocarbons

2-Chloronaphthalene	EPA 8270D
Hexachlorobenzene	EPA 8270D
Hexachlorobutadiene	EPA 8270D
Hexachlorocyclopentadiene	EPA 8270D
Hexachloroethane	EPA 8270D

Chlorophenoxy Acid Pesticides

2,4,5-T	EPA 8151A
2,4,5-TP (Silvex)	EPA 8151A
2,4-D	EPA 8151A
Dalapon	EPA 8151A
Dicamba	EPA 8151A

Haloethers

4-Bromophenylphenyl ether	EPA 8270D
4-Chlorophenylphenyl ether	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 8270D
Bis(2-chloroethyl)ether	EPA 8270D
Bis(2-chloroisopropyl) ether	EPA 8270D

Low Level Polynuclear Aromatic Hydrocarbons

Acenaphthene Low Level	EPA 8270D SIM
Acenaphthylene Low Level	EPA 8270D SIM
Anthracene Low Level	EPA 8270D SIM
Benz(a)anthracene Low Level	EPA 8270D SIM
Benzo(a)pyrene Low Level	EPA 8270D SIM
Benzo(b)fluoranthene Low Level	EPA 8270D SIM

Low Level Polynuclear Aromatic Hydrocarbons

Benzo(g,h,i)perylene Low Level	EPA 8270D SIM
Benzo(k)fluoranthene Low Level	EPA 8270D SIM
Chrysene Low Level	EPA 8270D SIM
Dibenz(a,h)anthracene Low Level	EPA 8270D SIM
Fluoranthene Low Level	EPA 8270D SIM
Fluorene Low Level	EPA 8270D SIM
Indeno(1,2,3-cd)pyrene Low Level	EPA 8270D SIM
Naphthalene Low Level	EPA 8270D SIM
Phenanthrene Low Level	EPA 8270D SIM
Pyrene Low Level	EPA 8270D SIM

Metals I

Barium, Total	EPA 6010C
Cadmium, Total	EPA 6020A
Calcium, Total	EPA 6010C
Chromium, Total	EPA 6020A
Copper, Total	EPA 6010C
Iron, Total	EPA 6010C
Lead, Total	EPA 6020A
Magnesium, Total	EPA 6010C

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below.

Metals I

Manganese, Total

EPA 6010C

Nickel, Total

EPA 6010A

Potassium, Total

EPA 6010C

Silver, Total

EPA 6010C

Sodium, Total

EPA 6010C

Metals II

Aluminum, Total

EPA 6010C

Antimony, Total

EPA 6020A

Arsenic, Total

EPA 6010C

Beryllium, Total

EPA 6020A

Chromium VI

EPA 7196A

Mercury, Total

EPA 7471B

Selenium, Total

EPA 6010G

Vanadium, Total

EPA 6020A

Zinc, Total

EPA 6010C

EPA 6020A

Metals III

Cobalt, Total

EPA 6010C

Molybdenum, Total

EPA 6020A

Thallium, Total

EPA 6010C

Tin, Total

EPA 6020A

Minerals

Chloride

EPA 9251

Sulfate (as SO₄)

EPA 9038

Miscellaneous

Boron, Total

EPA 6010C

Cyanide, Total

EPA 9012B

Formaldehyde

EPA 9014

Phenols

EPA 8315A

Specific Conductance

EPA 9065

Nitroaromatics and Isophorone

1,3,5-Trinitrobenzene

EPA 8330

1,3-Dinitrobenzene

EPA 8330

2,4,6-Trinitrotoluene

EPA 8330

2,4-Dinitrotoluene

EPA 8270D

2,6-Dinitrotoluene

EPA 8330

EPA 8270D

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Nitroaromatics and Isophorone

2,6-Dinitrotoluene	EPA 8330
2-Amino-4,6-dinitrotoluene	EPA 8330
2-Nitrotoluene	EPA 8330
3-Nitrotoluene	EPA 8330
4-Amino-2,6-dinitrotoluene	EPA 8330
4-Nitrotoluene	EPA 8330
Hexahydro-1,3,5-trinitro-1,3,5-triazine	EPA 8330
Isophorone	EPA 8270D
Methyl-2,4,6-trinitrophenylnitramine	EPA 8330
Nitrobenzene	EPA 8270D
Octahydro-tetranitro-tetrazocine	EPA 8330
Pyridine	EPA 8270D

Nitrosoamines

N-Nitrosodimethylamine	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 8270D
N-Nitrosodiphenylamine	EPA 8270D

Petroleum Hydrocarbons

Diesel Range Organics	EPA 8015C
Gasoline Range Organics	EPA 8015C

Phthalate Esters

Benzyl butyl phthalate	EPA 8270D
Bis(2-ethyl hexyl) phthalate	EPA 8270D
Diethyl phthalate	EPA 8270D

Phthalate Esters

Dimethyl phthalate	EPA 8270D
Di-n-butyl phthalate	EPA 8270D
Di-n-octyl phthalate	EPA 8270D

Polychlorinated Biphenyls

PCB-1016	EPA 8082A
PCB-1221	EPA 8082A
PCB-1232	EPA 8082A
PCB-1242	EPA 8082A
PCB-1248	EPA 8082A
PCB-1254	EPA 8082
PCB-1260	EPA 8082A
PCB-1262	EPA 8082A
PCB-1268	EPA 8082A

Polynuclear Aromatic Hydrocarbons

Acenaphthene	EPA 8270D
Acenaphthylene	EPA 8270D
Anthracene	EPA 8270D
Benzo(a)anthracene	EPA 8270D
Benzo(a)pyrene	EPA 8270D
Benzo(b)fluoranthene	EPA 8270D
Benzo(ghi)perylene	EPA 8270D
Benzo(k)fluoranthene	EPA 8270D
Chrysene	EPA 8270D
Dibenzo(a,h)anthracene	EPA 8270D
Fluoranthene	EPA 8270D

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

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Polynuclear Aromatic Hydrocarbons

Fluorene	EPA 8270D
Indeno[1,2,3- <i>cd</i>]pyrene	EPA 8270D
Naphthalene	EPA 8270D
Phenanthrene	EPA 8270D
Pyrene	EPA 8270D

Priority Pollutant Phenols

2,3,4,6-Tetrachlorophenol	EPA 8270D
2,4,5-Trichlorophenol	EPA 8270D
2,4,6-Trichlorophenol	EPA 8270D
2,4-Dichlorophenol	EPA 8270D
2,4-Dimethylphenol	EPA 8270D
2,4-Dinitrophenol	EPA 8270D
2-Chlorophenol	EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 8270D
2-Methylphenol	EPA 8270D
2-Nitrophenol	EPA 8270D
3-Methylphenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 8270D
4-Methylphenol	EPA 8270D
4-Nitrophenol	EPA 8270D
Pentachlorophenol	EPA 8270D
Pheno	EPA 8270D

Semi-Volatile Organics

1,1'-Biphenyl	EPA 8270D
1,2-Dichlorobenzene, Semi-volatile	EPA 8270D

Semi-Volatile Organics

1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
Acetophenone	EPA 8270D
Benzaldehyde	EPA 8270D
Benzoic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D
Caprolactam	EPA 8270D
Dibenzofuran	EPA 8270D
Volatile Aromatic	
1,2,4-Trichlorobenzene, Volatile	EPA 8260C
1,2,4-Trimethylbenzene	EPA 8260C
1,2-Dichlorobenzene	EPA 8260C
1,3,5-Trimethylbenzene	EPA 8260C
1,3-Dichlorobenzene	EPA 8260C
1,4-Dichlorobenzene	EPA 8260C
2-Chlorotoluene	EPA 8260C
4-Chlorotoluene	EPA 8260C
Benzene	EPA 8260C
Bromobenzene	EPA 8260C
Chlorobenzene	EPA 8260C
Ethyl benzene	EPA 8260C
Isopropylbenzene	EPA 8260C
Naphthalene, Volatile	EPA 8260C
n-Butylbenzene	EPA 8260C

Serial No.: 48543

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2014
Issued April 01, 2013

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. CHRISTOPHER WAKEFIELD
ALPHA ANALYTICAL
8 WALKUP DR.
WESTBOROUGH, MA 01581-1019

NY Lab Id No: 11148

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below.

Volatile Aromatics

n-Propylbenzene	EPA 8260C
p-isopropyltoluene (P-Cymene)	EPA 8260C
sec-Butylbenzene	EPA 8260C
Styrene	EPA 8260C
tert-Butylbenzene	EPA 8260C
Toluene	EPA 8260C
Total Xylenes	EPA 8260C

Volatile Halocarbons

1,1,1,2-Tetrachloroethane	EPA 8260C
1,1,1-Trichloroethane	EPA 8260C
1,1,2,2-Tetrachloroethane	EPA 8260C
1,1,2-Trifluoro-1,2,2-Trifluoroethane	EPA 8260C
1,1,2-Trichloroethane	EPA 8260C
1,1-Dichloroethane	EPA 8260C
1,1-Dichloroethene	EPA 8260C
1,1-Dichloropropene	EPA 8260C
1,2,3-Trichloropropane	EPA 8260C
1,2-Dibromo-3-chloropropane	EPA 8260C
1,2-Dibromomethane	EPA 8260C
1,2-Dichloroethane	EPA 8260C
1,2-Dichloropropane	EPA 8260C
1,3-Dichloropropane	EPA 8260C
2,2-Dichloropropane	EPA 8260C
2-Chloroethylvinyl ether	EPA 8260C
Bromochloromethane	EPA 8260C

Volatile Halocarbons

Bromodichloromethane	EPA 8260C
Bromoform	EPA 8260C
Bromomethane	EPA 8260C
Carbon tetrachloride	EPA 8260C
Chloroethane	EPA 8260C
Chloroform	EPA 8260C
Chloromethane	EPA 8260C
cis-1,2-Dichloroethene	EPA 8260C
cis-1,3-Dichloropropene	EPA 8260C
Dibromodichloromethane	EPA 8260C
Dibromomethane	EPA 8260C
Dichlorodifluoromethane	EPA 8260C
Hexachlorobutadiene; Volatile	EPA 8260C
Methylene chloride	EPA 8260C
Tetrachloroethene	EPA 8260C
trans-1,2-Dichloroethene	EPA 8260C
trans-1,3-Dichloropropene	EPA 8260C
trans-1,4-Dichloro-2-butene	EPA 8260C
Trichloroethene	EPA 8260C
Trichlorofluoromethane	EPA 8260C
Vinyl chloride	EPA 8260C

Volatile Organics

1,4-Dioxane	EPA 8260C
2-Butanone (Methylethyl Ketone)	EPA 8260C
2-Hexanone	EPA 8260C

Serial No.: 48543

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2014
Issued April 01, 2013



CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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MR. CHRISTOPHER WAKEFIELD
ALPHA ANALYTICAL
8 WALKUP DR
WESTBOROUGH MA 01581-1019

NY Lab Id No: 11148

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below:

Volatile Organics

4-Methyl-2-Pentanone	EPA 8260C
Acetone	EPA 8260C
Carbon Disulfide	EPA 8260C
Cyclohexane	EPA 8260C
Di-ethyl ether	EPA 8260C
Methyl acetate	EPA 8260C
Methyl cyclohexane	EPA 8260B
	EPA 8260C
Methyl tert-butyl ether	EPA 8260C
tert-butyl alcohol	EPA 8260C
Vinyl acetate	EPA 8260C

Sample Preparation Methods

EPA 3006A
EPA 3050B
EPA 3540C
EPA 3546
EPA 3580A
EPA 5035A-H
EPA 5035A-L
EPA 9010C
EPA 9030B

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

MAILED
APR 17 2013
EXPIRES APR 01 2014
ISSUED APR 01 2013
REVISED APR 18 2013

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. JOSEPH WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No: 11627

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analyses are listed below:

Amines

1,2-Diphenylhydrazine	EPA 8270D
2-Nitroaniline	EPA 8270D
3-Nitroaniline	EPA 8270D
4-Chloroaniline	EPA 8270D
4-Nitroaniline	EPA 8270D
Aniline	EPA 8270D
Carbazole	EPA 8270D
Pyridine	EPA 8270D

Benzidines

3,3'-Dichlorobenzidine	EPA 8270D
3,3'-Dimethylbenzidine	EPA 8270D

Benzidine

Benzidine	EPA 8270D
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Chlorinated Hydrocarbon Pesticides

4,4'-DDD	EPA 8081B
4,4'-DDE	EPA 8081B
4,4'-DDT	EPA 8081B
Aldrin	EPA 8081B
alpha-BHC	EPA 8081B
alpha-Chlordane	EPA 8081B
beta-BHC	EPA 8081B
Chlordane Total	EPA 8081B
delta-BHC	EPA 8081B
Dieldrin	EPA 8081B
Endosulfan I	EPA 8081B
Endosulfan II	EPA 8081B

Chlorinated Hydrocarbon Pesticides

Ergosulfan sulfate	EPA 8081B
Endrin	EPA 8081B
Endrin aldehyde	EPA 8081B
Endrin ketone	EPA 8081B
gamma-Chlordane	EPA 8081B
Heptachlor	EPA 8081B
Heptachlor epoxide	EPA 8081B
lindane	EPA 8081B
Metroxylchlor	EPA 8081B
Toxaphene	EPA 8081B

Chlorinated Hydrocarbons

1,2,4,5-Tetrachlorobenzene	EPA 8270D
1,2,4-Trichlorobenzene	EPA 8270D
2-Chloronaphthalene	EPA 8270D
Hexachlorobenzene	EPA 8270D
Hexachlorobutadiene	EPA 8270D
Hexachlorocyclohexadiene	EPA 8270D
Hexachloroethane	EPA 8270D
Hexafluoropropene	EPA 8270D

Dissolved Gases

Ethane	RSK-175
Ethene (Ethylene)	RSK-175
Methane	RSK-175
Propane	RSK-175

Serial No.: 49076

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2014
Issued April 01, 2013
Revised April 18, 2013

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab ID No. 11627

Is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below:

Halogenated Compounds

4-Bromophenylphenyl ether	EPA 8270D
4-Chlorophenylphenyl ether	EPA 8270D
Bis(2-chloromethoxy)methane	EPA 8270D
Bis(2-chloromethyl)ether	EPA 8270D
Bis(2-chloroisobutyl)ether	EPA 8270D

Low Level Polynuclear Aromatic

Acenaphthene Low Level	EPA 8270D SIM
Acenaphthylene Low Level	EPA 8270D SIM
Anthracene Low Level	EPA 8270D SIM
Benzo(a)anthracene Low Level	EPA 8270D SIM
Benzo(a)pyrene Low Level	EPA 8270D SIM
Benzo(b)fluoranthene Low Level	EPA 8270D SIM
Benzo(g,h,i)perylene Low Level	EPA 8270D SIM
Benzo(k)fluoranthene Low Level	EPA 8270D SIM
Chrysene Low Level	EPA 8270D SIM
Dibenzo(a,h)anthracene Low Level	EPA 8270D SIM
Fluoranthene Low Level	EPA 8270D SIM
Fluorene Low Level	EPA 8270D SIM
Indeno(1,2,3- <i>cd</i>)pyrene Low Level	EPA 8270D SIM
Naphthalene Low Level	EPA 8270D SIM
Phenanthrene Low Level	EPA 8270D SIM
Pyrene Low Level	EPA 8270D SIM

Minerals

Alkalinity	SM-18-21-2320B (97)
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Nitroaromatics and Isophorone

2,4-Dinitrotoluene	EPA 8270D
2,6-Dinitrotoluene	EPA 8270D
Isophorone	EPA 8270D
Nitrobenzene	EPA 8270D

Nitrosoamines

N-Nitrosodimethylamine	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 8270D
N-Nitrosodiphenylamine	EPA 8270D

Organophosphate Pesticides

Atrazine	EPA 8270D
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Petroleum Hydrocarbons

Diesel Range Organics	EPA 8015D
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Phthalate Esters

Benzyl-butyl phthalate	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 8270D
Diethyl phthalate	EPA 8270D
Dimethyl phthalate	EPA 8270D
Dimethyl phthalate	EPA 8270D
Dim-octyl phthalate	EPA 8270D

Polychlorinated Biphenyls

PCB-119	EPA 8082A
PCB-126	EPA 8082A
PCB-1016	EPA 8082A

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2014
Issued April 01, 2013
Revised April 18, 2013

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No. 11627

Is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below:

Polychlorinated Biphenyls

PCB-1221	EPA 8082A
PCB-1222	EPA 8082A
PCB-1242	EPA 8082A
PCB-1233	EPA 8082A
PCB-1251	EPA 8082A
PCB-1260	EPA 8082A

Polynuclear Aromatics

Acenaphthene	EPA 8270D
Acenaphthylene	EPA 8270D
Anthracene	EPA 8270D
Benz(a)anthracene	EPA 8270D
Benzo(a)pyrene	EPA 8270D
Benzo(b)fluoranthene	EPA 8270D
Benzol(g,h)perylene	EPA 8270D
Benzo(k)fluoranthene	EPA 8270D
Chrysene	EPA 8270D
Dibenz(a,h)anthracene	EPA 8270D
Fluoranthene	EPA 8270D
Fluorene	EPA 8270D
Indeno(1,2,3-cd)pyrene	EPA 8270D
Naphthalene	EPA 8270D
Phenanthrene	EPA 8270D
Pyrene	EPA 8270D

Priority Pollutant Phenols

2,3,4,6-Tetrachlorophenol	EPA 8270D
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Priority Pollutant Phenols

2,4,5-Trichlorophenol	EPA 8270D
2,4,6-Trichlorophenol	EPA 8270D
2,4-Dichlorophenol	EPA 8270D
2,4-Dimethylphenol	EPA 8270D
2,4-Dinitrophenol	EPA 8270D
2-Chlorophenol	EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 8270D
2-Methylphenol	EPA 8270D
2-Nitrophenol	EPA 8270D
3-Methylphenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 8270D
4-Methylphenol	EPA 8270D
4-Nitrophenol	EPA 8270D
Pentachlorophenol	EPA 8270D
Phenol	EPA 8270D
Residue	
Solids, Total Suspended	SM 18-21-2540D (97)
Semi-Volatile Organics	
1,2-Dichlorobenzene, Semi-volatile	EPA 8270D
1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
Acetophenone	EPA 8270D
Benzolic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D

Serial No.: 49076

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NEW YORK STATE DEPARTMENT OF HEALTH
WALSWORTH CENTER

Expires 12:01 AM April 01, 2014

Issued April 01, 2013

Revised April 18, 2013



CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No. 11627

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below.

Semi-Volatile Organics

Caprolactam EPA 8270D
Dibenzofuran EPA 8270D

Wastewater Metals I

Barium, Total EPA 6020A
Cadmium, Total EPA 6020A
Chromium, Total EPA 6020A
Copper, Total EPA 6020A
Iron, Total EPA 6020A
Lead, Total EPA 6020A
Manganese, Total EPA 6020A
Nickel, Total EPA 6020A
Silver, Total EPA 6020A
Strontium, Total EPA 6020A

Wastewater Metals II

Aluminum, Total EPA 6020A
Antimony, Total EPA 6020A
Arsenic, Total EPA 6020A
Beryllium, Total EPA 6020A
Mercury, Low Level EPA 1621E
Mercury, Total EPA 7170A
Selenium, Total EPA 6020A
Vanadium, Total EPA 6020A
Zinc, Total EPA 6020A

Wastewater Metals III

Cobalt, Total EPA 6020A
Molybdenum, Total EPA 6020A
Thallium, Total EPA 6020A

Wastewater Miscellaneous

Specific Conductance EPA 9050A
Turbidity EPA 180.1 Rev. 2.0

Sample Preparation Methods

EPA 3020A
EPA 3510C

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No. 11627

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below.

Amines

1,2-Dibromoethane	EPA 8270D
2-Nitroaniline	EPA 8270D
3-Nitroaniline	EPA 8270D
4-Chloroaniline	EPA 8270D
4-Nitroaniline	EPA 8270D
Aniline	EPA 8270D
Carbazole	EPA 8270D

Benzidines

3,3'-Dichlorobenzidine	EPA 8270D
Benzidine	EPA 8270D

Characteristic Testing

Composity	EPA 9040C
TCLP	EPA 9045D

Chlorinated Hydrocarbon Pesticides

4,4-DDD	EPA 8081B
4,4'-DD	EPA 8081B
4,4'-DDT	EPA 8081B
Aldrin	EPA 8081B
alpha-BHC	EPA 8081B
alpha-Chlordane	EPA 8081B
beta-BHC	EPA 8081B
Chlordane Total	EPA 8081B
delta-BHC	EPA 8081B

Chlorinated Hydrocarbon Pesticides

Dieldrin	EPA 8081B
Endosulfan I	EPA 8081B
Endosulfan II	EPA 8081B
Endosulfan sulfate	EPA 8081B
Endrin	EPA 8081B
Endrin aldehyde	EPA 8081B
Endrin Ketone	EPA 8081B
gamma-Chlordane	EPA 8081B
Heptachlor	EPA 8081B
Heptachlor epoxide	EPA 8081B
Lindane	EPA 8081B
Methoxychlor	EPA 8081B
Pentachloronitrobenzene	EPA 8270D
Toxaphene	EPA 8081B

Chlorinated Hydrocarbons

T2,4,5,6-Tetrachlorobenzene	EPA 8270D
1,2,4-Trichlorobenzene	EPA 8270D
2-Chlorophthalene	EPA 8270D
Hexachlorobenzene	EPA 8270D
Hexachlorobutadiene	EPA 8270D
Hexachlorocyclopentadiene	EPA 8270D
Hexachloroethane	EPA 8270D
Hexachloropropane	EPA 8270D
Halogenates	
4-Bromophenylphenyl ether	EPA 8270D

Serial No.: 49077

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



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National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below.

Haloethers

4-Chlorophenylphenyl ether	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 8270D
Bis(2-chloroethyl)ether	EPA 8270D
Bis(2-chloroisopropyl) ether	EPA 8270D

Low Level Polynuclear Aromatic Hydrocarbons

Acenaphthene Low Level	EPA 8270D SIM
Acenaphthylene Low Level	EPA 8270D SIM
Anthracene Low Level	EPA 8270D SIM
Benzo(a)anthracene Low Level	EPA 8270D SIM
Benzo(a)pyrene Low Level	EPA 8270D SIM
Benzo(b)fluoranthene Low Level	EPA 8270D SIM
Benzo(g,h,i)perylene Low Level	EPA 8270D SIM
Benzo(k)fluoranthene Low Level	EPA 8270D SIM
Chrysene Low Level	EPA 8270D SIM
Dibenz(a,h)anthracene Low Level	EPA 8270D SIM
Fluoranthene Low Level	EPA 8270D SIM
Fluorene Low Level	EPA 8270D SIM
Indeno(1,2,3-ij)perylene Low Level	EPA 8270D SIM
Naphthalene Low Level	EPA 8270D SIM
Phenanthrene Low Level	EPA 8270D SIM
Pyrene Low Level	EPA 8270D SIM

Metals I

Copper, Total	EPA 6020A
Iron, Total	EPA 6020A
Lead, Total	EPA 6020A
Manganese, Total	EPA 6020A
Nickel, Total	EPA 6020A
Silver, Total	EPA 6020A

Metals II

Aluminum, Total	EPA 6020A
Antimony, Total	EPA 6020A
Arsenic, Total	EPA 6020A
Beryllium, Total	EPA 6020A
Mercury, Total	EPA 7471B
Selenium, Total	EPA 6020A
Vanadium, Total	EPA 6020A
Zinc, Total	EPA 6020A

Metals III

Cobalt, Total	EPA 6020A
Molybdenum, Total	EPA 6020A
Ruthenium, Total	EPA 6020A

Miscellaneous

Organic Carbon, Total	EPA 8060
Nitroaromatics and Isophorone	EPA 8270D

Serial No.: 49077

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below.

Nitroaromatics and Isophorone

2,6-Dinitrotoluene	EPA 8270D
Isophorone	EPA 8270D
Nitrobenzene	EPA 8270D
Pyridine	EPA 8270D

Polychlorinated Biphenyls

PCB-1254	EPA 8092A
PCB-1260	EPA 8082A

Nitrosoamines

N-Nitrosodimethylamine	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 8270D
N-Nitrosodiphenylamine	EPA 8270D

Polynuclear Aromatic Hydrocarbons

Acenaphthene	EPA 8270D
Acenaphthylene	EPA 8270D
Anthracene	EPA 8270D
Benzo(a)anthracene	EPA 8270D
Benzo(a)pyrene	EPA 8270D

Petroleum Hydrocarbons

Diesel Range Organics	EPA 8015D
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Benzo(b)fluoranthene	EPA 8270D
Benzo(g,h,i)perylene	EPA 8270D
Benzo(k)fluoranthene	EPA 8270D
Chrysene	EPA 8270D
Dibenzo(a,h)anthracene	EPA 8270D

Diesel Range Organics

Benzyl butyl phthalate	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 8270D
Diethyl phthalate	EPA 8270D
Dimethyl phthalate	EPA 8270D
Di-n-butyl phthalate	EPA 8270D

Fluoranthene	EPA 8270D
Fluorene	EPA 8270D
Indeno(1,2,3- <i>cd</i>)pyrene	EPA 8270D
Naphthalene	EPA 8270D
Phenanthrene	EPA 8270D

Polychlorinated Biphenyls

PCB-1	EPA 8082A
PCB-1016	EPA 8082A
PCB-1221	EPA 8082A
PCB-1232	EPA 8082A
PCB-1242	EPA 8082A
PCB-1243	EPA 8082A

Priority Pollutant Phenols	EPA 8270D
2,3,4,6-Tetrachlorophenol	EPA 8270D
2,4,4-Trichlorophenol	EPA 8270D
2,4,6-Trichlorophenol	EPA 8270D
2,4-Dichlorophenol	EPA 8270D
2,4-Dimethylphenol	EPA 8270D

Serial No.: 49077

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2014

Issued April 01, 2013

Revised April 18, 2013



CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No: 11027

Is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below.

Priority Pollutant Phenols

2,4-Dinitrophenol	EPA 8270D
2-Chlorophenol	EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 8270D
2-Methylphenol	EPA 8270D
2-Nitrophenol	EPA 8270D
3-Methylphenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 8270D
4-Methylphenol	EPA 8270D
4-Nitrophenol	EPA 8270D
Pentachlorophenol	EPA 8270D
Phenol	EPA 8270D

Sample Preparation Methods

EPA 3580A

Semi-Volatile Organics

1,2-Dichlorobenzene, Semivolatile	EPA 8270D
1,3-Dichlorobenzene, Semivolatile	EPA 8270D
1,4-Dichlorobenzene, Semivolatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
Acetophenone	EPA 8270D
Benzolo Azo	EPA 8270D
Benzyl alcohol	EPA 8270D
Dibenzofuran	EPA 8270D

Sample Preparation Methods

EPA 3050B
EPA 3051A
EPA 3540C
EPA 3570

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MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab ID No. 11627

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES AIR AND EMISSIONS

All approved analytes are listed below.

Acrylates

Acetonitrile	EPA TO-15
Acrylonitrile	EPA TO-15
Methyl methacrylate	EPA TO-15

Chlorinated Hydrocarbons

1,2,4-trichlorobenzene	EPA TO-15
Hexachlorobutadiene	EPA TO-15

Polychlorinated Biphenyls

PCB-1016	EPA TO-10A
PCB-1221	EPA TO-10A
PCB-1232	EPA TO-10A
PCB-1242	EPA TO-10A
PCB-1248	EPA TO-10A
PCB-1254	EPA TO-10A
PCB-1260	EPA TO-10A
PCB-1262	EPA TO-10A
PCB-1268	EPA TO-10A

Polynuclear Aromatics

Naphthalene	EPA TO-15
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Purgeable Aromatics

1,2,4-Trimethylbenzene	EPA TO-15
1,2-Dichlorobenzene	EPA TO-15
1,3,5-Trimethylbenzenes	EPA TO-15
1,3-Dichlorobenzene	EPA TO-15
4-Dichlorobenzene	EPA TO-15

Purgeable Aromatics

2-Chlorotoluene	EPA TO-15
Benzene	EPA TO-15
Chlorobenzene	EPA TO-15
Ethyl benzene	EPA TO-15
Isopropylbenzene	EPA TO-15
m/p-Xylenes	EPA TO-15
o-Xylene	EPA TO-15
Styrene	EPA TO-15
Toluene	EPA TO-15
Total Xylenes	EPA TO-15

Purgeable Halocarbons

1,1,1-Trichloroethane	EPA TO-15
1,1,2-Tetrachloroethane	EPA TO-15
1,1,2-Trichloroethane	EPA TO-15
1,1-Dichloroethane	EPA TO-15
1,1-Dichloroethene	EPA TO-15
1,2-Dibromo-3-chloropropane	EPA TO-15
1,2-Dibromoethane	EPA TO-15
1,2-Dichloroethane	EPA TO-15
1,2-Dichloropropane	EPA TO-15
3-Chloropropene (Allyl chloride)	EPA TO-15
Bromodichloromethane	EPA TO-15
Bromoform	EPA TO-15
Bromomethane	EPA TO-15

Serial No.: 49078

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NEW YORK STATE DEPARTMENT OF HEALTH
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MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No. 17627

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National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES AIR AND EMISSIONS

All approved analytes are listed below.

Purgeable Halocarbons

Carbon tetrachloride	EPA TO-15
Chloroethane	EPA TO-15
Chloroform	EPA TO-15
Chloromethane	EPA TO-15
cis-1,2-Dichloroethene	EPA TO-15
sis-1,3-Dichloropropene	EPA TO-15
Dibromoethane	EPA TO-15
Dichlorodifluoromethane	EPA TO-15
Methylene chloride	EPA TO-15
Tetrachloroethene	EPA TO-15
trans-1,2-Dichloroethane	EPA TO-15
trans-1,3-Dichloropropene	EPA TO-15
Trichloroethene	EPA TO-15
Trifluoromethane	EPA TO-15
Vinyl bromide	EPA TO-15
Vinyl chloride	EPA TO-15

Volatile Organics

Acetone	EPA TO-15
Carbon disulfide	EPA TO-15
Cyclohexane	EPA TO-15
Hexane	EPA TO-15
Isopropanol	EPA TO-15
Methanol	EPA TO-15
Methyl tert-butyl ether	EPA TO-15
n-Heptane	EPA TO-15
tert-butyl alcohol	EPA TO-15
Vinyl acetate	EPA TO-15

Volatile Chlorinated Organics

Benzyl chloride	EPA TO-15
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Volatile Organics

2-Dichlorotetrafluoroethane	EPA TO-15
1,3-Butadiene	EPA TO-15
1,4-Dioxane	EPA TO-15
2,2,4-Trimethylpentane	EPA TO-15
2-Butanone (Methyl ethyl ketone)	EPA TO-15
Acetaldehyde	EPA TO-15

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