

December 19, 2013

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 - 2013
River Place I & II
West 42nd Street, New York, New York
BCP Site No. C231024, C231012
Langan Project No.: 170040901**

Dear Mr. MacNeal:

Langan Engineering & Environmental Services, PC (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 third annual sampling event conducted in October 2013.

2013 Annual Groundwater Sampling

On October 8, 2013, 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 in 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, 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 80% or more of the static water level.

MW-N2 and MW-S2 were purged until physical and chemical parameters stabilized. Approximately 9.0 and 10.5 gallons were purged from each monitoring well, respectively. After purging, samples MW-N2-100813 and MW-S2-100813 were collected using a Waterra pump and dedicated tubing.

The groundwater samples, MW-N2-100813 and MW-S2-100813 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 VOCs by EPA Method 8260, 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

During this sampling event no free product was observed in MW-N2 and MW-S2. The wells were observed to be in good condition.

Groundwater Analytical Results

Analytical results for the second annual 2013 monitoring event that exceeded the NYSDEC TOGS 1.1.1 AWQS Class GA Standards are summarized below.

MW-N2	
VOCs	
• 1,2,4-trimethylbenzene	• p/m-xylene
• benzene	• o-xylene
• ethylbenzene	• toluene
• naphthalene	
SVOCs	
• 2,4-dimethylphenol	• benzo(b)fluoranthene
• acenaphthene	• chrysene
• benzo(a)pyrene	• naphthalene
Inorganics	
• cyanide	• manganese
• iron	• sodium
• magnesium	

MW-S2	
VOCs	
• 1,2,4-trimethylbenzene	• naphthalene
• benzene	• n-propylbenzene
• ethylbenzene	• o-xylene
• isopropylbenzene	
SVOCs	
• acenaphthene	• chrysene
• benzo(a)pyrene	• indeno(1,2,3-cd)pyrene
• benzo(b)fluoranthene	• naphthalene
Inorganics	
• cyanide	• magnesium
• iron	• sodium
• lead	

Analytical results for the First Quarter 2009 through Third Annual 2013 sampling rounds are summarized in Tables 1 through 3 and the laboratory analytical report for the 2013 annual sampling results is included as Attachment B.

Please contact us if you have any questions.

Sincerely,
Langan Engineering & Environmental Services, P.C.



Joel B. Landes, P.E.
Senior Associate

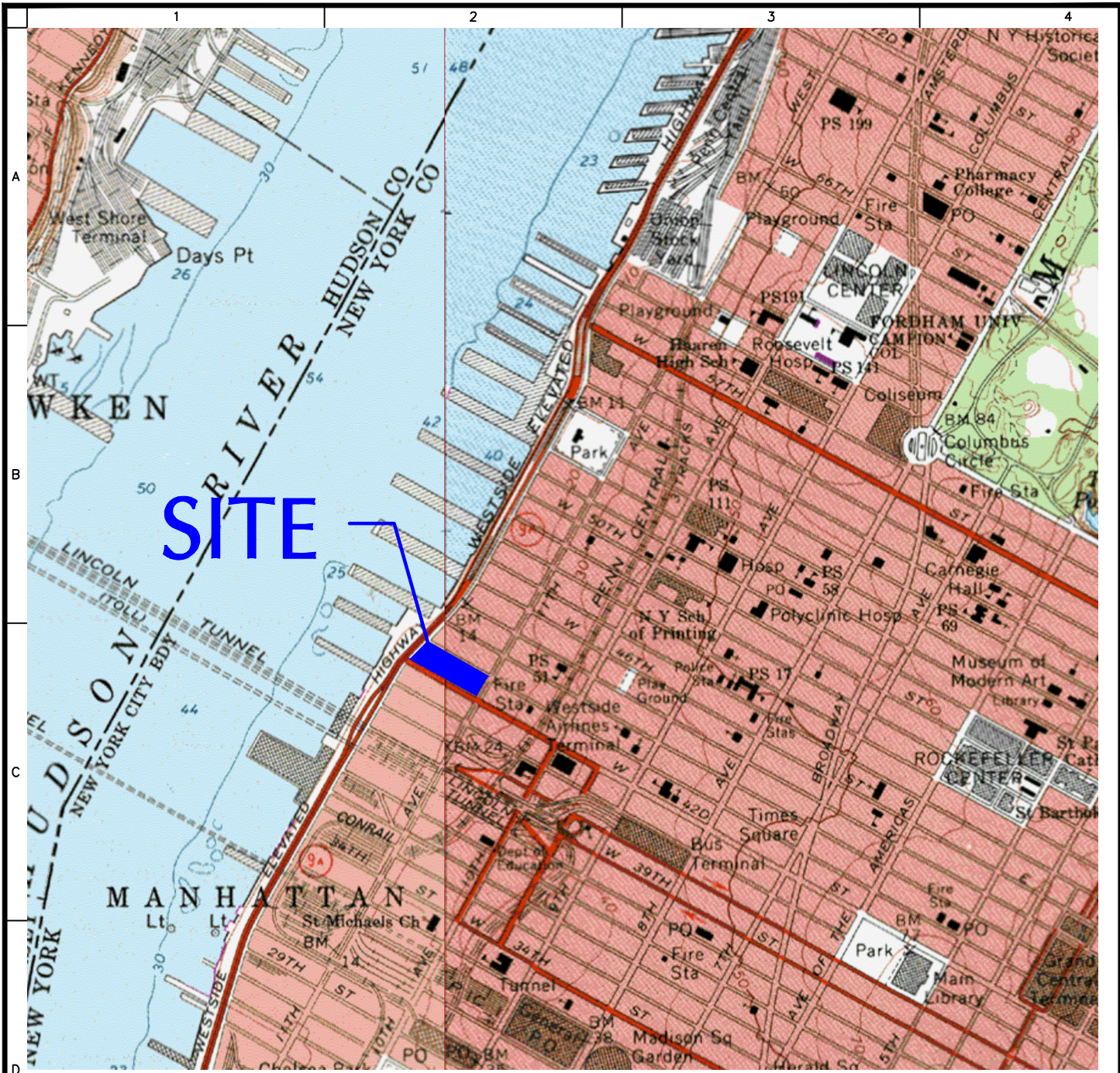
Enclosure(s):

Figure 1	Site Location Map
Figure 2	Well Location Map
Table 1	VOC Detections in Groundwater Samples
Table 2	SVOC Detections in Groundwater Samples
Table 3	Total Metals and Cyanide in Groundwater Sample
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

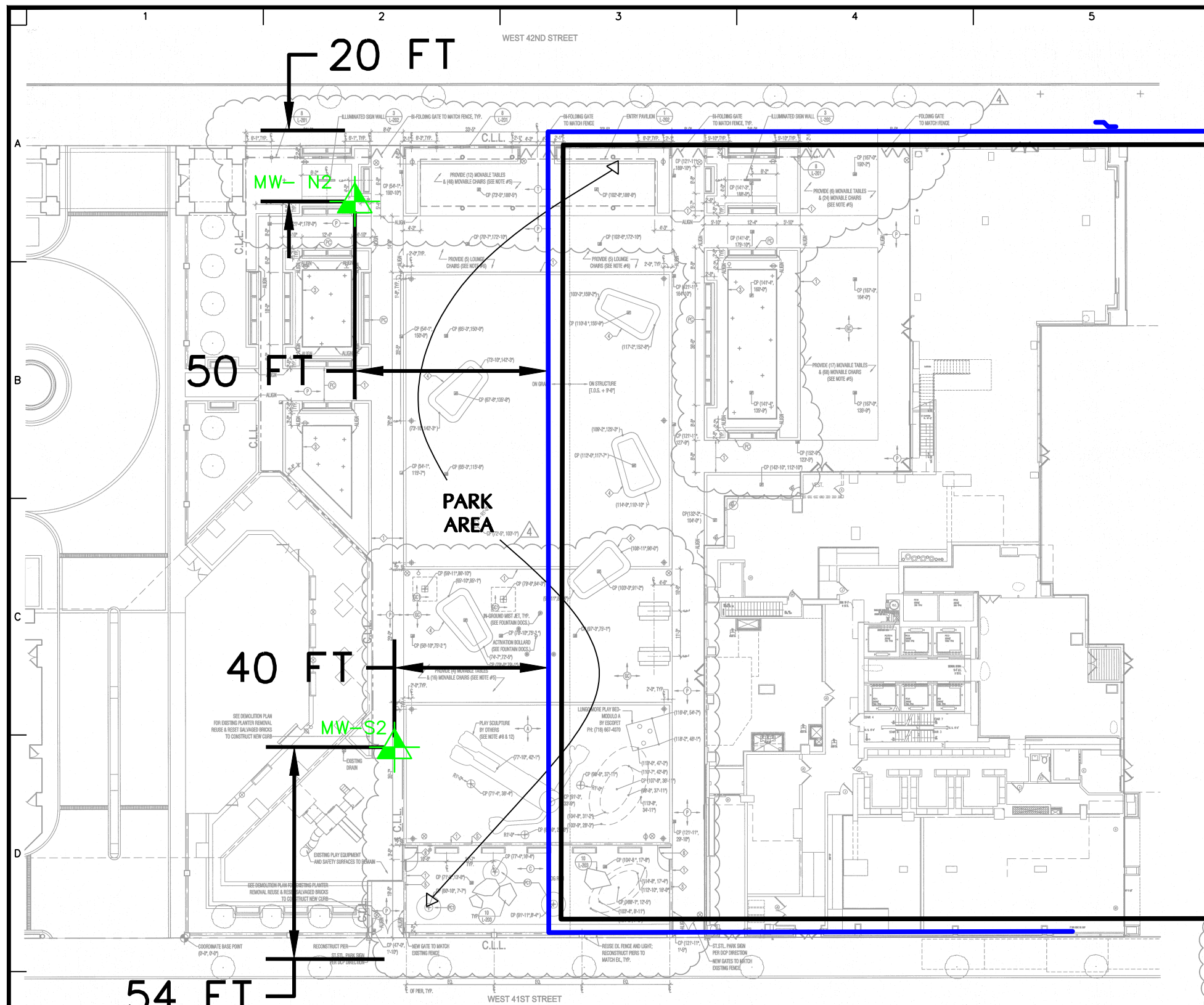
FIGURES



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.

<p>21 Penn Plaza, 360 West 31st Street, 8th Floor New York, NY 10001 T: 212.479.5400 F: 212.479.5444 www.langan.com</p> <p>Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. Langan Engineering and Environmental Services, Inc. Langan CT, Inc. Langan International LLC Collectively known as Langan</p>	Project	Figure Title	Project No.	<p>1</p> <p>Sheet 1 of 2</p>	
	<p>NEW YORK NEW YORK</p>	<p>RIVER PLACE I AND II</p> <p>SITE LOCATION MAP</p>	Date		
			Scale		
		Drawn By	Checked By		Submission Date
		NCR	JH		November 2013



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-INSTALLED ON DECEMBER 28, 2009. LOCATIONS ARE APPROXIMATE.

LEGEND:

MW-S2 APPROXIMATE LOCATION OF MONITORING WELLS IN ACCORDANCE WITH SITE MANAGEMENT PLAN

SHEET PILE WALL

PROPERTY BOUNDARY (RIVER PLACE II)

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LANGAN

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Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC

Collectively known as Langan

Project

RIVER PLACE I & II

NEW YORK

Figure Title

MONITORING WELL LOCATION MAP

NEW YORK

Project No.
170040901

Date
11/1/2013

Scale
NTS

Drawn By
NCR

Checked By
JH

Submission Date

Figure

2

Sheet **1** of **2**

TABLES

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

		Park Area Northern Well										
		1st Quarter 2009	2nd Quarter 2009	3rd Quarter 2009*	4th Quarter 2009**	1st Quarter 2010	2nd Quarter 2010	3rd Quarter 2010	4th Quarter 2010	YEAR 1 - 2011	YEAR 2 - 2012	YEAR 3 - 2013
SAMPLING DATE	NYSDEC TOGS	3/16/2009	6/17/2009	9/18/2009	1/7/2010	3/1/2010	6/10/2010	9/8/2010	12/15/2010	10/17/2011	10/17/2012	10/8/2013
LANGAN SAMPLE ID	1.1.1 AWQS	MW-N-3-16-09	MW-N-6-17-09	MW-N-9-18-09	MW-N2-1-07-10	MW-N2-3-01-10	MW-N2-6-10-10	MW-N2-9-8-10	MW-N2-12-15-10	MW-N2-10-17-11	MW-N2-101712	MW-N2-100813
LAB SAMPLE ID		L0903143-01	L0908040-01	L0913185-01	L1000282-01	L1003006-01	L1008735-02	L1013903-01	L1020042-01	L1116955-02		L1320135-02
Volatile Organics by GC/MS (µg/L)												
Westborough Lab												
1,2,4-Trimethylbenzene	5	1200 U, D ⁵⁰⁰	1200 U, D ⁵⁰⁰	1200 U, D ⁵⁰⁰	1200 U	250 U, D ¹⁰⁰	500 U, D ²⁰⁰	620 U, D ²⁵⁰	620 D ²⁵⁰	270 J	240 J	80 J
1,3,5-Trimethylbenzene	5	1200 U, D ⁵⁰⁰	1200 U, D ⁵⁰⁰	1200 U, D ⁵⁰⁰	1200 U	250 U, D ¹⁰⁰	500 U, D ²⁰⁰	620 U, D ²⁵⁰	620 U, D ²⁵⁰	96 J	620 U	250 U
Benzene	1	19000 D ⁵⁰⁰	17000 D ⁵⁰⁰	15000 D ⁵⁰⁰	2900 D ⁵⁰⁰	610 D ¹⁰⁰	1100	2100 D ²⁵⁰	2400 D ²⁵⁰	2400	1600	1100
Ethylbenzene	5	1900 D ⁵⁰⁰	1900 D ⁵⁰⁰	1800 D ⁵⁰⁰	1400 D ⁵⁰⁰	170 D ¹⁰⁰	410	810 D ²⁵⁰	980 D ²⁵⁰	810	580 J	250
Isopropylbenzene	5	250 U, D ⁵⁰⁰	250 U, D ⁵⁰⁰	250 U, D ⁵⁰⁰	250 U	50 U, D ¹⁰⁰	100 U, D ²⁰⁰	120 U, D ²⁵⁰	120 U, D ²⁵⁰	37 U	620 U	250 U
Methylene chloride	5	2500 U, D ⁵⁰⁰	2500 U, D ⁵⁰⁰	2500 U	2500 U	500 U, D ¹⁰⁰	1000 U, D ²⁰⁰	1200 U, D ²⁵⁰	1200 U, D ²⁵⁰	110 U	620 U	250 U
Naphthalene	10	15000 D ⁵⁰⁰	18000 D ⁵⁰⁰	19000 D ⁵⁰⁰	22000 D ⁵⁰⁰	4200 D ¹⁰⁰	5400	12000 D ²⁵⁰	15000 D ²⁵⁰	10000	9200	3600
n-Butylbenzene	5	250 U, D ⁵⁰⁰	250 U, D ⁵⁰⁰	250 U	250 U	50 U, D ¹⁰⁰	100 U, D ²⁰⁰	120 U, D ²⁵⁰	120 U, D ²⁵⁰	39 U	620 U	250 U
n-Propylbenzene	5	250 U, D ⁵⁰⁰	250 U, D ⁵⁰⁰	250 U, D ⁵⁰⁰	250 U	50 U, D ¹⁰⁰	ND U, D ²⁰⁰	120 U	120 U	35 U	620 U	250 U
o-Xylene	5	1400 D ⁵⁰⁰	1400 D ⁵⁰⁰	1200 D ⁵⁰⁰	1000 D ⁵⁰⁰	180 D ¹⁰⁰	330	590 D ²⁵⁰	760 D ²⁵⁰	630	470 J	230 J
p/m-Xylene	5	3200 D ⁵⁰⁰	3100 D ⁵⁰⁰	2900 D ⁵⁰⁰	2200 D ⁵⁰⁰	330 D ¹⁰⁰	600	1100 D ²⁵⁰	1400 D ²⁵⁰	1200	760	280
p-Isopropyltoluene	5	250 U, D ⁵⁰⁰	250 U, D ⁵⁰⁰	250 U	250 U	50 U, D ¹⁰⁰	100 U, D ²⁰⁰	120 U, D ²⁵⁰	120 U, D ²⁵⁰	38 U	620 U	250 U
Styrene	5	500 U, D ⁵⁰⁰	500 U, D ⁵⁰⁰	500 U	500 U	100 U, D ¹⁰⁰	200 U, D ²⁰⁰	250 U, D ²⁵⁰	250 U, D ²⁵⁰	72 U	620 U	250 U
Toluene	5	4200 D ⁵⁰⁰	4400 D ⁵⁰⁰	4100 D ⁵⁰⁰	740 D ⁵⁰⁰	75 U, D ¹⁰⁰	150 U, D ²⁰⁰	290 D ²⁵⁰	420 D ²⁵⁰	410	240 J	90 J

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).

- Values exceeding NYSDEC TOGS 1.1.1 AWQS are
- Method Detection Limits (MDLs) are elevated above
- µg/L: Micrograms per liter

* Monitoring well MW-S was destroyed during

** Monitoring wells MW-N and MW-S were destroyed

Qualifiers:

U - Indicates the minimum detection Limit (MDL) is reported. The concentration of the analyte is less than the

D^x - Dilution factor of X

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

		Park Area Southern Well*										
		1st Quarter 2009	1st Quarter 2009	2nd Quarter 2009	4th Quarter 2009**	1st Quarter 2010	2nd Quarter 2010	3rd Quarter 2010	4th Quarter 2010	YEAR 1 - 2011	YEAR 2 - 2012	YEAR 3 - 2013
SAMPLING DATE	NYSDEC TOGS	3/16/2009	3/16/2009	6/17/2009	1/7/2010	3/1/2010	6/10/2010	9/8/2010	12/15/2010	10/17/2011	10/17/2012	10/8/2013
LANGAN SAMPLE ID	1.1.1 AWQS	MW-S-3-16-09	DUP-3-16-09	MW-S-6-17-09	MW-S2-1-07-10	MW-S2-3-01-10	MW-S2-6-10-10	MW-S2-9-8-10	MW-S2-12-15-10	MW-S2-10-17-11	MW-S2-101712	MW-S2-100813
LAB SAMPLE ID		L0903143-02	L0903143-03	L0908040-02	L1000282-02	L1003006-02	L1008735-01	L1013903-02	L1020042-02	L1116955-01		L1320125-01
Volatile Organics by GC/MS (µg/L)			Duplicate of MW-N-3-16-09									
Westborough Lab												
1,2,4-Trimethylbenzene	5	76 D ²⁵	1200 U, D ⁵⁰⁰	25 U, D ¹⁰	280 D ¹⁰	130 D ⁵⁰	180 D ⁵⁰	150 U, D ⁵⁰	200 D ⁵⁰	45	79	26
1,3,5-Trimethylbenzene	5	62 U, D ²⁵	1200 U, D ⁵⁰⁰	25 U, D ¹⁰	61 D ¹⁰	120 U, D ⁵⁰	120 U, D ⁵⁰	120 U, D ⁵⁰	120 U, D ⁵⁰	1 U	3 J	10 U
Benzene	1	140 D ²⁵	19000 D ⁵⁰⁰	170 D ¹⁰	200 D ¹⁰	75 D ⁵⁰	120 D ⁵⁰	110 D ⁵⁰	120 D ⁵⁰	23	94	99
Ethylbenzene	5	160 D ²⁵	1900 D ⁵⁰⁰	20 D ¹⁰	710 D ¹⁰	330 D ⁵⁰	590 D ⁵⁰	460 D ⁵⁰	560 D ⁵⁰	100	260	160
Isopropylbenzene	5	35 D ²⁵	250 U, D ⁵⁰⁰	5.4 D ¹⁰	64 D ¹⁰	30 D ⁵⁰	61 D ⁵⁰	44 D ⁵⁰	63 D ⁵⁰	13	46	55
Methylene chloride	5	120 U, D ²⁵	2500 U, D ⁵⁰⁰	50 U, D ¹⁰	420 D ¹⁰	250 U, D ⁵⁰	250 U, D ⁵⁰	250 U, D ⁵⁰	250 U, D ⁵⁰	2.7 U	6.2 U	10 U
Naphthalene	10	610 D ²⁵	15000 D ⁵⁰⁰	350 D ¹⁰	4900 D ¹⁰	1800 D ⁵⁰	1700 D ⁵⁰	1900 D ⁵⁰	1100 D ⁵⁰	170	150	62
n-Butylbenzene	5	12 U, D ²⁵	250 U, D ⁵⁰⁰	5 U, D ¹⁰	6.2 D ¹⁰	25 U, D ⁵⁰	25 U, D ⁵⁰	25 U, D ⁵⁰	25 U, D ⁵⁰	0.98 U	6.2 U	10 U
n-Propylbenzene	5	19 D ²⁵	250 U, D ⁵⁰⁰	5 U, D ¹⁰	42 D ¹⁰	25 U, D ⁵⁰	37 D ⁵⁰	30 D ⁵⁰	37 D ⁵⁰	8.5	34	22
o-Xylene	5	43 D ²⁵	1300 D ⁵⁰⁰	16 D ¹⁰	320 D ¹⁰	110 D ⁵⁰	150 D ⁵⁰	70 D ⁵⁰	50 U, D ⁵⁰	24	20	12
p/m-Xylene	5	50 D ²⁵	3100 D ⁵⁰⁰	21 D ¹⁰	410 D ¹⁰	150 D ⁵⁰	150 D ⁵⁰	82 D ⁵⁰	50 U, D ⁵⁰	17	9.2	10 U
p-Isopropyltoluene	5	12 U, D ²⁵	250 U, D ⁵⁰⁰	5 U, D ¹⁰	11 D ¹⁰	25 U, D ⁵⁰	25 U, D ⁵⁰	25 U, D ⁵⁰	25 U, D ⁵⁰	0.94 U	6.2 U	10 U
Styrene	5	25 U, D ²⁵	500 U, D ⁵⁰⁰	10 U, D ¹⁰	40 D ¹⁰	50 U, D ⁵⁰	50 U, D ⁵⁰	50 U, D ⁵⁰	50 U, D ⁵⁰	1.8 U	6.2 U	10 U
Toluene	5	19 U, D ²⁵	4000 D ⁵⁰⁰	29 D ¹⁰	180 D ¹⁰	46 D ⁵⁰	38 U, D ⁵⁰	38 U, D ⁵⁰	38 U, D ⁵⁰	8.5	4.2 J	10 U

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).
- Values exceeding NYSDEC TOGS 1.1.1 AWQS are
- Method Detection Limits (MDLs) are elevated above
- µg/L: Micrograms per liter
- * Monitoring well MW-S was destroyed during
- ** Monitoring wells MW-N and MW-S were destroyed

Qualifiers:

U - Indicates the minimum detection Limit (MDL) is reported. The concentration of the analyte is less than the

D^x - Dillution factor of X

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

		Quality Control											
		1st Quarter 2009	1st Quarter 2009	2nd Quarter 2009	3rd Quarter 2009	4th Quarter 2009	1st Quarter 2010	2nd Quarter 2010	3rd Quarter 2010	4th Quarter 2010	YEAR 1 - 2011	YEAR 2 - 2012	
SAMPLING DATE	NYSDEC TOGS	3/16/2009	3/16/2009	6/17/2009	6/17/2009	1/7/2010	3/1/2010	6/10/2010	9/8/2010	12/15/2010	10/17/2011	10/17/2012	
LANGAN SAMPLE ID	1.1.1 AWQS	FB-3-16-09	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	
LAB SAMPLE ID		L0903143-04	L0903143-05	L0908040-03	L0913185-02	L1000282-03	L1003006-03	L1008735-03	L1013903-03	L1020042-03	L1116955-03		
Volatile Organics by GC/MS (µg/L)													
Westborough Lab													
1,2,4-Trimethylbenzene	5	2.5 U	2.5 U	2.5 U	0.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.27 U	2.5 U	
1,3,5-Trimethylbenzene	5	2.5 U	2.5 U	2.5 U	0.75 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.21 U	2.5 U	
Benzene	1	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.19 U	0.5 U	
Ethylbenzene	5	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.26 U	2.5 U	
Isopropylbenzene	5	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.19 U	2.5 U	
Methylene chloride	5	5 U	5 U	5 U	0.5 U	5 U	5 U	5 U	5 U	5 U	0.54 U	2.5 U	
Naphthalene	10	2.5 U	2.5 U	2.5 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.22 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	0.5 U	0.5 U	0.20 U	2.5 U	
n-Propylbenzene	5	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.19 U	2.5 U	
o-Xylene	5	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	0.33 U	2.5 U	
p/m-Xylene	5	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	0.35 U	2.5 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	0.5 U	0.5 U	0.19 U	2.5 U	
Styrene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.36 U	2.5 U	
Toluene	5	0.75 U	0.75 U	0.75 U	2.5 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.23 U	2.5 U	

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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D^x - Dilution factor of X

Table 2
SVOC Exceedances in Groundwater Samples
River Place II
New York, New York
Langan Project No. 170040901

		Park Area Northern Well											
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter**	1st Quarter 2010	2nd Quarter 2010	3rd Quarter 2010	4th Quarter 2010	YEAR 1 - 2011	YEAR 2 - 2012	YEAR 3 - 2013	
SAMPLING DATE	NYSDEC TOGS 1.1.1 AWQS	3/16/2009	6/17/2009	9/18/2009	1/7/2010	3/1/2010	6/10/2010	9/8/2010	12/15/2010	10/17/2011	10/17/2012	10/8/2013	
LANGAN SAMPLE ID		MW-N-3-16-09	MW-N-6-17-09	MW-N-9-18-09	MW-N2-1-7-10	MW-N2-3-1-10	MW-N2-6-10-10	MW-N2-9-8-10	MW-N2-12-15-10	MW-N2-10-17-11	MW-N2-101712	MW-N2100813	
LAB SAMPLE ID		L0903143-01	L0908040-01	L0913185-01	L1000282-01	L1003006-01	L1008735-02	L1013903-01	L1020042-01	L1116955-02		L1320135-02	
Semi-Volatile Organics (µg/L)													
Westborough Lab													
2,4-Dimethylphenol	50	1800 D ⁵⁰	830 D ⁵	1200 D ¹⁰⁰	270 D ⁵	500 U, D ⁵⁰	29	160	10 U, D ¹	1.4 U	150	89	
Acenaphthene	20	120 D ²⁰	95 D ⁴⁰	99 D ⁵⁰	61 D ²⁰⁰	65 D ⁵⁰	17	97	170 D ⁵⁰⁰	140	190	96	
Benzo(a)pyrene	0	7.2 D ²⁰	8.2 U, D ⁴⁰	9.6 U, D ⁵⁰	40 U, D ²⁰⁰	10 U, D ⁵⁰	5 U	80 U	100 U, D ⁵⁰⁰	28 U	50 U	1.2	
Benzo(b)fluoranthene	0.002	8.4 D ²⁰	8.2 U, D ⁴⁰	9.6 U, D ⁵⁰	40 U, D ²⁰⁰	10 U, D ⁵⁰	7.2 D ²⁰	80 U	100 U, D ⁵⁰⁰	28 U	50 U	1.2	
Bis(2-Ethylhexyl)phthalate	5	24 U, D ⁵	26 U, D ⁵	46 D ⁵	25 U, D ⁵	250 U, D ⁵⁰	5 U	5 U	5 D ¹	1.4 U	3 U	15 U	
Chrysene	0.002	4.1 D ²⁰	8.2 U, D ⁴⁰	9.6 U, D ⁵⁰	40 U, D ²⁰⁰	10 U, D ⁵⁰	4200 R1, D ⁴⁰⁰	80 U	100 U, D ⁵⁰⁰	20 U	50 U	1	
Fluorene	50	56 D ²⁰	59 D ⁴⁰	47 D ⁵⁰	40 U, D ²⁰⁰	39 D ⁵⁰	7.2 D ²⁰	80 U	100 D ⁵⁰⁰	58 J	67	29	
Indeno(1,2,3-cd)Pyrene	---	NA	NA	NA	NA	10 U, D ⁵⁰	29 D ²⁰	NA	NA	32 U	50 U	0.64 J	
Naphthalene	10	12000 D ⁴⁰⁰	8900 D ⁴⁰⁰	9400 D ¹⁰⁰⁰	2200 D ²⁰⁰	2700 D ⁵⁰	8.9 D ²⁰	6900	9100 D ⁵⁰⁰	6800	8400	2800	
Phenanthrene	50	100 D ²⁰	53 D ⁴⁰	62 D ⁵⁰	40 D ²⁰⁰	52 D ⁵⁰	84 D ²⁰	80 U	100 D ⁵⁰⁰	97	90	33	
Phenol	1	120 D ⁵	61 D ⁵	87 D ⁵	35 U, D ⁵	350 U, D ⁵⁰	17	27	16 D ¹	0.26 U	5 U	25 U	

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).

- Values exceeding NYSDEC TOGS 1.1.1 AWQS are highlighted and BOLD.

- Method Detection Limits (MDLs) are elevated above TOGS criteria in the majority of the samples due to high levels of contamination.

- µg/L: Micrograms per liter

* 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 - Indicates the minimum detection Limit (MDL) is reported. The concentration of the analyte is less than the MDL.

D^x - Dilution factor of X

R1 - Analyte Results are from sample re-analysis

Table 2
SVOC Exceedances in Groundwater Samples
River Place II
New York, New York
Langan Project No. 170040901

SAMPLING DATE LANGAN SAMPLE ID LAB SAMPLE ID	NYSDEC TOGS 1.1.1 AWQS	Park Area Southern Well*												Quality Control	
		1st Quarter 3/16/2009 MW-S-3-16-09 L0903143-02	1st Quarter 3/16/2009 DUP-3-16-09 L0903143-03	2nd Quarter 6/17/2009 MW-S-6-17-09 L0908040-02	4th Quarter** 1/7/2010 MW-S2-1-7-10 L0908040-02	1st Quarter 2010 3/1/2010 MW-S2-3-1-10 L1003006-02	2nd Quarter 2010 6/10/2010 MW-S2-6-10-10 L1008735-01	3rd Quarter 2010 9/8/2010 MW-S2-9-8-10 L1013903-02	4th Quarter 2010 12/15/2010 MW-S2-12-15-10 L1020042-02	YEAR 1 - 2011 10/17/2011 MW-S2-10-17-11 L1116955-01	YEAR 2 - 2012 10/17/2012 MW-S2-101712	YEAR 3 - 2013 10/8/2013 MW-S2-100813 L1320135-01	1st Quarter 3/16/2009 FB-3-16-09 L0903143-04		
Semi-Volatile Organics (µg/L) Westborough Lab			Duplicate of MW-N-3-16-09												
2,4-Dimethylphenol	50	10 U	1800 D ²⁵	10 U	10 U	500 U, D ⁵⁰	10 U	10 U	10 D ⁵⁰	1.2 U	5 U	25 U	9.6 U		
Acenaphthene	20	14	160 D ²⁰⁰	0.2 U	200 U, D ¹⁰⁰⁰	63 D ⁵⁰	7 U	41	63 D ⁵⁰	15	49	39	0.19 U		
Benzo(a)pyrene	0	0.2 U	39 U, D ⁵	0.2 U	200 U, D ¹⁰⁰⁰	15 D ⁵⁰	5 U	10 U	100 U, D ⁵⁰	4.0	5.4	6.4	0.19 U		
Benzo(b)fluoranthene	0.002	0.2 U	39 U, D ⁵	0.2 U	200 U, D ¹⁰⁰⁰	14 D ⁵⁰	4 D ¹⁰	10 U	17 D ⁵⁰	2.9	3	4.7	0.19 U		
Bis(2-Ethylhexyl)phthalate	5	5 U	24 U, D ⁵	5.1 U	5 U	250 U, D ⁵⁰	5 U	5 U	5 U, D ⁵	1.4 U	3 U	15 U	4.8 U		
Chrysene	0.002	0.2 U	39 U, D ⁵	0.2 U	200 U, D ¹⁰⁰⁰	10 U, D ⁵⁰	1600 D ¹⁰⁰	10 U	10 U, D ⁵	3.2	5.3	6	0.19 U		
Fluorene	50	8.9	80 D ⁵	0.2 U	200 U, D ¹⁰⁰⁰	61 D ⁵⁰	4 D ¹⁰	36	42 U, D ⁵	13	33	16	0.19 U		
Indeno(1,2,3-cd)Pyrene	---	NA	NA	NA	NA	10 U, D ⁵⁰	10 D ¹⁰	NA	15 D ⁵⁰	1.8	3.3	3.1	NA		
Naphthalene	10	300 D ¹⁰	14000 D ⁴⁰⁰	0.62	11000 D ¹⁰⁰⁰	1400 D ¹⁰⁰	4.8 D ¹⁰	990	400 D ⁵⁰	9.3	90	51	0.34		
Phenanthrene	50	11	150 D ⁵	0.2 U	200 U, D ¹⁰⁰⁰	120 D ⁵⁰	74 D ¹⁰	52	63 D ⁵⁰	16	32	11	0.19 U		
Phenol	1	7 U	110 D ⁵	7.2 U	7.7	350 U, D ⁵⁰	7 U	7 U	7 D ⁵⁰	0.26 U	5 U	25 U	6.7 U		

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).

- Values exceeding NYSDEC TOGS 1.1.1 AWQS are highlighted and BOLD.

- Method Detection Limits (MDLs) are elevated above TOGS criteria in the majority of the samples due to high levels of contamination.

- µg/L: Micrograms per liter

* 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 - Indicates the minimum detection Limit (MDL) is reported. The concentration of the analyte is less than the MDL.

D^x - Dilution factor of X

R1 - Analyte Results are from sample re-analysis

Table 3
Total Metals and Cyanide Exceedances in Groundwater Samples
River Place II
New York, New York
Langan Project No. 170040901

		Park Area Northern Well											
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter**	1st Quarter 2010	2nd Quarter 2010	3rd Quarter 2010	4th Quarter 2010	YEAR 1 - 2011	YEAR 2 - 2012	YEAR 3-2013	
LANGAN SAMPLE ID	NYSDEC TOGS 1.1.1 AWQS	MW-N-3-16-09 3/16/2009	MW-N-6-17-09 6/17/2009	MW-N-9/18/09 9/18/2009	MW-N2-1-7-2010 1/7/2010	MW-N2-3-1-2010 3/1/2010	MW-N2-6-10-10 6/10/2010	MW-N2-9-8-10 9/8/2010	MW-N2-12-15-10 12/15/2010	MW-N2-10-17-11 10/17/2011	MW-N2-101712 10/17/2012	MW-N2-100813 10/8/2013	
LAB SAMPLE ID		L0903143-01	L0908040-01	L0913185-01	L1000282-01	L1000282-01	L1008735-02	L1013903-01	L1020042-01	L1116955-02			
Total Metals (µg/L)													
Wesborough Lab													
Iron, Total	300	5300	1900	1200	3500	4000	4800	2600	12000	3300	1270	1780	
Lead, Total	25	15	10 U	10 U	10 U	10 U	10 U	10 U	67	3 U	2.4 J	1.79	
Magnesium, Total	35000	70000	70000	59000	83000	46000	46000	51000	86000	64000	42000	57700	
Manganese, Total	300	1570	1570	1340	746	603	632	528	816	582	542.8	337.5	
Mercury, Total	0.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	ND	ND	0.3 U	0.1 U	0.2 U	0.2 U	
Sodium, Total	20000	300000 D ⁵	270000	250000	240000	110000	160000	200000	240000	210000	127000	175000	
Cyanide (ug/L) - Wesborough Lab													
Cyanide, Total	200	1100 D ¹⁰	789 D ⁵	799 D ²	890 D ¹⁰	1780 D ¹⁰	1500 D ⁵	1060 D ¹⁰	1680 D ¹⁰	612	126	1210	

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).
 - Values exceeding NYSDEC TOGS 1.1.1 AWQS are highlighted and BOLD.
 - Method Detection Limits (MDLs) are elevated above TOGS criteria in the majority of the samples due to high levels of contamination
 - µg/L: Micrograms per liter
 - * 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 - Indicates the minimum detection Limit (MDL) is reported. The concentration of the analyte is less than the MDL.
 - D^x - Dillution factor of X
 - R1 - Analytical Results are from sample re-analysis

Table 3
Total Metals and Cyanide Exceedances in Groundwater Samples
River Place II
New York, New York
Langan Project No. 170040901

		Park Area Southern Well*											Quality Control
		1st Quarter	1st Quarter	2nd Quarter	4th Quarter**	1st Quarter 2010	2nd Quarter 2010	3rd Quarter 2010	4th Quarter 2010	YEAR 1 - 2011	YEAR 2 - 2012	YEAR 3 - 2013	1st Quarter
LANGAN SAMPLE ID	NYSDEC TOGS 1.1.1 AWQS	MW-S-3-16-09	DUP-3-16-09	MW-S-6-17-09	MW-S2-1-7-2010	MW-N2-3-1-2010	MW-S2-6-10-10	MW-S2-9-8-10	MW-S2-12-15-10	MW-S2-10-17-11	MW-S2-101712	MW-S2-100813	FB-3-16-09
SAMPLING DATE		3/16/2009	3/16/2009	6/17/2009	1/7/2010	3/1/2010	6/10/2010	9/8/2010	12/15/2010	10/17/2011	10/17/2012	10/8/2013	3/16/2009
LAB SAMPLE ID		L0903143-02	L0903143-03	L0908040-02	L1000282-02	L1000282-01	L1008735-01	L1013903-02	L1020042-02	L1116955-02		L1320135-01	L0903143-04
Total Metals (µg/L)			Duplicate of MW-N-3-16-09										
Wesborough Lab													
Iron, Total	300	21000	2700	9200	3200	11000	5000	9800	12000	9900	12100	5830	50 U
Lead, Total	25	158	10 U	45	17	117	29	86	166	42	108.7	70.29	10 U
Magnesium, Total	35000	71000	72000	48000	120000	87000	85000	93000	84000	68000	43800	53800	100 U
Manganese, Total	300	598	1430	403	327	636	430	492	558	537	574.9	279.6	10 U
Mercury, Total	0.7	0.5	0.2 U	0.2 U	0.3	0.6	0.0002	0.00005	0.9	0.1 U	0.8	0.2 U	0.2 U
Sodium, Total	20000	96000	320000 D ⁵	100000	98000	89000	68000	76000	67000	42000	32600	49400	2000 U
Cyanide (ug/L) - Wesborough Lab													
Cyanide, Total	200	1920 D ¹⁰	1090 D ¹⁰	1920 D ⁵	1090 D ¹⁰	973 D ⁵	1110 D ⁵	1540 D ¹⁰	1410 D ¹⁰	798	152	798	5 U, D ⁵

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).
 - Values exceeding NYSDEC TOGS 1.1.1 AWQS are highlighted and BOLD.
 - Method Detection Limits (MDLs) are elevated above TOGS criteria in the majority of the samples due to high levels of contamination
 - µg/L: Micrograms per liter
 - * 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 - Indicates the minimum detection Limit (MDL) is reported. The concentration of the analyte is less than the MDL.
 - D^x - Dillution factor of X
 - R1 - Analytical Results are from sample re-analysis

**ATTACHMENT A
GROUNDWATER SAMPLING FORMS**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site:	Riverplace I and II	Well#/Location:	MW-N2	Job No.	170040901
Date:	10/8/2013	Weather:	Low 60s - Partly Cloudy	Sampling Personnel:	B. Howard

Well Information	
Sample ID	MW-N2-100813
Well Depth (ft)	19.45
Screened Interval (ft)	---
Casing Elevation (msl)	---
Casing Diameter (in)	2
Depth to Water (ft)	10.11
Water Elevation (msl)	---
Casing Volume (gal)	1.52
PID/FID Reading (ppm)	---

Purging Information	
Purging Method	Wattera Pump
Purging Rate (gpm)	0.11
Start Purge Time	13:00
End Purge Time	14:20
Volume Purged (gal)	9

Sampling Information	
Sampling Method	Wettera Pump
Start Sampling Time	14:20
End Sampling Time	14:30
Depth Before Sampling (ft)	10.92
Number Bottles Collected	8

Sample Time	Parameters							Purged Volume (gallons)	Notes
	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	ORP (mV)	Depth to Water (ft)		
13:00	***Start Purging***								
13:10	7.20	2.48	67.8	3.21	18.12	-91	10.35	1.5	
13:20	7.22	2.53	53.9	3.20	18.10	-108	10.42	2.5	
13:30	7.25	2.55	45.0	3.18	18.09	-117	10.45	3.5	
13:40	7.25	2.59	44.8	3.18	18.11	-122	10.47	4.5	
13:50	7.25	2.60	44.5	3.18	18.10	-127	10.50	5.5	
14:00	7.24	2.70	40.1	2.98	18.28	-126	10.51	6.5	
14:10	7.25	2.71	42.2	2.90	18.30	-125	10.51	8.5	
14:20	7.25	2.72	43.10	2.89	18.33	-125	10.50	9.0	
Collect Sample									

Notes/Remarks

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site:	Riverplace I and II	Well#/Location:	MW-S2	Job No.	170040901
Date:	10/8/2013	Weather:	Low 60s - Partly Cloudy	Sampling Personnel:	B. Howard

Well Information	
Sample ID	MW-S2-100813
Well Depth (ft)	19.45
Screened Interval (ft)	--
Casing Elevation (msl)	--
Casing Diameter (in)	2
Depth to Water (ft)	10.71
Water Elevation (msl)	--
Casing Volume (gal)	1.43
PID/FID Reading (ppm)	--

Purging Information	
Purging Method	Wattera Pump
Purging Rate (gpm)	0.09
Start Purge Time	10:45
End Purge Time	12:45
Volume Purged (gal)	10.5

Sampling Information	
Sampling Method	Wettera Pump
Start Sampling Time	12:45 PM
End Sampling Time	12:55 PM
Depth Before Sampling (ft)	12.00
Number Bottles Collected	8

Parameters									
Sample Time	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	ORP (mV)	Depth to Water (ft)	Purged Volume (gallons)	Notes
10:45	***Start Purging Well***								
10:55	7.12	1.77	375	18.41	16.36	-150	11.10	0.5	
11:05	7.15	1.77	349	15.60	16.86	-172	11.12	1.0	
11:15	7.19	1.78	313	11.10	17.10	-201	11.21	1.5	
11:25	7.23	1.70	227	12.01	17.00	-220	11.25	2.0	
11:35	7.24	1.76	210	12.15	16.99	-220	11.28	3.0	
11:45	7.24	1.75	198	11.08	17.00	-231	11.30	4.5	
11:55	7.22	1.75	213	10.12	17.00	-238	11.29	5.0	
12:05	7.23	1.73	196	9.56	17.01	-240	11.30	6.0	
12:15	7.25	1.71	195	9.17	17.00	-241	11.31	7.0	
12:25	7.25	1.70	201	8.39	17.00	-243	11.30	8.5	
12:35	7.25	1.70	188	7.52	17.00	-245	11.30	10.0	
12:45	7.26	1.69	182	7.45	17.01	-245	11.30	10.5	

Collect Sample									

Notes/Remarks

* After two hours of purging the monitoring well, the turbidity did not drop below 50 NTUs.



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



ANALYTICAL REPORT

Lab Number:	L1320135
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Jason Hayes
Phone:	(212) 479-5427
Project Name:	RIVER PLACE I+II
Project Number:	170040901
Report Date:	10/15/13

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: L1320135
Report Date: 10/15/13

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1320135-01	MW-S2-100813	MANHATTAN, NY	10/08/13 12:45
L1320135-02	MW-N2-100813	MANHATTAN, NY	10/08/13 14:20
L1320135-03	TB01-100813	MANHATTAN, NY	10/08/13 00:00

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

Lab Number: L1320135
Report Date: 10/15/13

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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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 ADEx 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 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.

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

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

Lab Number: L1320135
Report Date: 10/15/13

Case Narrative (continued)

Report Submission

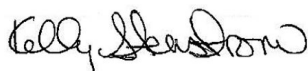
All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Semivolatile Organics

L1320135-01 and -02 have elevated detection limits due to the dilutions required by the sample matrices.

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: 10/15/13

ORGANICS

VOLATILES

Project Name: RIVER PLACE I+II**Lab Number:** L1320135**Project Number:** 170040901**Report Date:** 10/15/13**SAMPLE RESULTS**

Lab ID: L1320135-01 D
 Client ID: MW-S2-100813
 Sample Location: MANHATTAN, NY
 Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 10/14/13 14:24
 Analyst: PD

Date Collected: 10/08/13 12:45
 Date Received: 10/08/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	10	2.8	4
1,1-Dichloroethane	ND		ug/l	10	2.8	4
Chloroform	ND		ug/l	10	2.8	4
Carbon tetrachloride	ND		ug/l	2.0	0.54	4
1,2-Dichloropropane	ND		ug/l	4.0	0.53	4
Dibromochloromethane	ND		ug/l	2.0	0.60	4
1,1,2-Trichloroethane	ND		ug/l	6.0	2.0	4
Tetrachloroethene	ND		ug/l	2.0	0.72	4
Chlorobenzene	ND		ug/l	10	2.8	4
Trichlorofluoromethane	ND		ug/l	10	2.8	4
1,2-Dichloroethane	ND		ug/l	2.0	0.53	4
1,1,1-Trichloroethane	ND		ug/l	10	2.8	4
Bromodichloromethane	ND		ug/l	2.0	0.77	4
trans-1,3-Dichloropropene	ND		ug/l	2.0	0.66	4
cis-1,3-Dichloropropene	ND		ug/l	2.0	0.57	4
1,1-Dichloropropene	ND		ug/l	10	2.8	4
Bromoform	ND		ug/l	8.0	2.6	4
1,1,2,2-Tetrachloroethane	ND		ug/l	2.0	0.57	4
Benzene	99		ug/l	2.0	0.63	4
Toluene	ND		ug/l	10	2.8	4
Ethylbenzene	160		ug/l	10	2.8	4
Chloromethane	ND		ug/l	10	2.8	4
Bromomethane	ND		ug/l	10	2.8	4
Vinyl chloride	ND		ug/l	4.0	1.3	4
Chloroethane	ND		ug/l	10	2.8	4
1,1-Dichloroethene	ND		ug/l	2.0	0.57	4
trans-1,2-Dichloroethene	ND		ug/l	10	2.8	4
Trichloroethene	ND		ug/l	2.0	0.70	4
1,2-Dichlorobenzene	ND		ug/l	10	2.8	4
1,3-Dichlorobenzene	ND		ug/l	10	2.8	4
1,4-Dichlorobenzene	ND		ug/l	10	2.8	4

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

SAMPLE RESULTS

Lab ID: L1320135-01 D

Date Collected: 10/08/13 12:45

Client ID: MW-S2-100813

Date Received: 10/08/13

Sample Location: MANHATTAN, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/l	10	2.8	4
p/m-Xylene	ND		ug/l	10	2.8	4
o-Xylene	12		ug/l	10	2.8	4
cis-1,2-Dichloroethene	ND		ug/l	10	2.8	4
Dibromomethane	ND		ug/l	20	4.0	4
1,2,3-Trichloropropane	ND		ug/l	10	2.8	4
Acrylonitrile	ND		ug/l	20	6.0	4
Styrene	ND		ug/l	10	2.8	4
Dichlorodifluoromethane	ND		ug/l	20	4.0	4
Acetone	ND		ug/l	20	4.0	4
Carbon disulfide	ND		ug/l	20	4.0	4
2-Butanone	ND		ug/l	20	4.0	4
Vinyl acetate	ND		ug/l	20	4.0	4
4-Methyl-2-pentanone	ND		ug/l	20	4.0	4
2-Hexanone	ND		ug/l	20	4.0	4
Bromochloromethane	ND		ug/l	10	2.8	4
2,2-Dichloropropane	ND		ug/l	10	2.8	4
1,2-Dibromoethane	ND		ug/l	8.0	2.6	4
1,3-Dichloropropane	ND		ug/l	10	2.8	4
1,1,1,2-Tetrachloroethane	ND		ug/l	10	2.8	4
Bromobenzene	ND		ug/l	10	2.8	4
n-Butylbenzene	ND		ug/l	10	2.8	4
sec-Butylbenzene	ND		ug/l	10	2.8	4
tert-Butylbenzene	ND		ug/l	10	2.8	4
o-Chlorotoluene	ND		ug/l	10	2.8	4
p-Chlorotoluene	ND		ug/l	10	2.8	4
1,2-Dibromo-3-chloropropane	ND		ug/l	10	2.8	4
Hexachlorobutadiene	ND		ug/l	10	2.8	4
Isopropylbenzene	46		ug/l	10	2.8	4
p-Isopropyltoluene	ND		ug/l	10	2.8	4
Naphthalene	62		ug/l	10	2.8	4
n-Propylbenzene	22		ug/l	10	2.8	4
1,2,3-Trichlorobenzene	ND		ug/l	10	2.8	4
1,2,4-Trichlorobenzene	ND		ug/l	10	2.8	4
1,3,5-Trimethylbenzene	ND		ug/l	10	2.8	4
1,2,4-Trimethylbenzene	26		ug/l	10	2.8	4
1,4-Dioxane	ND		ug/l	1000	160	4
1,4-Diethylbenzene	4.9	J	ug/l	8.0	2.8	4
4-Ethyltoluene	4.0	J	ug/l	8.0	2.8	4

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

SAMPLE RESULTS

Lab ID: L1320135-01 D

Date Collected: 10/08/13 12:45

Client ID: MW-S2-100813

Date Received: 10/08/13

Sample Location: MANHATTAN, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4,5-Tetramethylbenzene	2.7	J	ug/l	8.0	2.6	4
Ethyl ether	ND		ug/l	10	2.8	4
trans-1,4-Dichloro-2-butene	ND		ug/l	10	2.8	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	90		70-130
Dibromofluoromethane	102		70-130

Project Name: RIVER PLACE I+II**Lab Number:** L1320135**Project Number:** 170040901**Report Date:** 10/15/13**SAMPLE RESULTS**

Lab ID: L1320135-02 D
 Client ID: MW-N2-100813
 Sample Location: MANHATTAN, NY
 Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 10/14/13 15:03
 Analyst: PD

Date Collected: 10/08/13 14:20
 Date Received: 10/08/13
 Field Prep: Not Specified

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
1,1-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	1100		ug/l	50	16.	100
Toluene	90	J	ug/l	250	70.	100
Ethylbenzene	250		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	17.	100
1,2-Dichlorobenzene	ND		ug/l	250	70.	100
1,3-Dichlorobenzene	ND		ug/l	250	70.	100
1,4-Dichlorobenzene	ND		ug/l	250	70.	100

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

SAMPLE RESULTS

Lab ID: L1320135-02 D

Date Collected: 10/08/13 14:20

Client ID: MW-N2-100813

Date Received: 10/08/13

Sample Location: MANHATTAN, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/l	250	70.	100
p/m-Xylene	280		ug/l	250	70.	100
o-Xylene	230	J	ug/l	250	70.	100
cis-1,2-Dichloroethene	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	100	100
Carbon disulfide	ND		ug/l	500	100	100
2-Butanone	ND		ug/l	500	100	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	3600		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
1,2,4-Trimethylbenzene	80	J	ug/l	250	70.	100
1,4-Dioxane	ND		ug/l	25000	4100	100
1,4-Diethylbenzene	ND		ug/l	200	70.	100
4-Ethyltoluene	ND		ug/l	200	70.	100

Project Name: RIVER PLACE I+II**Lab Number:** L1320135**Project Number:** 170040901**Report Date:** 10/15/13**SAMPLE RESULTS**

Lab ID: L1320135-02 D

Date Collected: 10/08/13 14:20

Client ID: MW-N2-100813

Date Received: 10/08/13

Sample Location: MANHATTAN, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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	111		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	90		70-130
Dibromofluoromethane	102		70-130

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

Lab Number: L1320135
Report Date: 10/15/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/14/13 12:31
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG643772-3					
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
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
1,1-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
Trichloroethene	ND		ug/l	0.50	0.17
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

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

Lab Number: L1320135
Report Date: 10/15/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/14/13 12:31
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG643772-3					
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
cis-1,2-Dichloroethene	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
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.0
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.0
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
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
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

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

Lab Number: L1320135
Report Date: 10/15/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/14/13 12:31
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG643772-3					
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
1,4-Dioxane	ND		ug/l	250	41.
1,4-Diethylbenzene	ND		ug/l	2.0	0.70
4-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	109		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG643772-1 WG643772-2								
Methylene chloride	103		106		70-130	3		20
1,1-Dichloroethane	104		108		70-130	4		20
Chloroform	108		109		70-130	1		20
Carbon tetrachloride	122		124		63-132	2		20
1,2-Dichloropropane	101		102		70-130	1		20
Dibromochloromethane	109		112		63-130	3		20
1,1,2-Trichloroethane	102		106		70-130	4		20
Tetrachloroethene	106		107		70-130	1		20
Chlorobenzene	102		105		75-130	3		20
Trichlorofluoromethane	119		120		62-150	1		20
1,2-Dichloroethane	111		113		70-130	2		20
1,1,1-Trichloroethane	114		115		67-130	1		20
Bromodichloromethane	111		115		67-130	4		20
trans-1,3-Dichloropropene	105		111		70-130	6		20
cis-1,3-Dichloropropene	96		102		70-130	6		20
1,1-Dichloropropene	103		107		70-130	4		20
Bromoform	90		99		54-136	10		20
1,1,2,2-Tetrachloroethane	88		95		67-130	8		20
Benzene	100		103		70-130	3		20
Toluene	103		104		70-130	1		20
Ethylbenzene	107		108		70-130	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG643772-1 WG643772-2								
Chloromethane	109		120		64-130	10		20
Bromomethane	83		85		39-139	2		20
Vinyl chloride	132		134		55-140	2		20
Chloroethane	109		109		55-138	0		20
1,1-Dichloroethene	94		104		61-145	10		20
trans-1,2-Dichloroethene	102		104		70-130	2		20
Trichloroethene	101		106		70-130	5		20
1,2-Dichlorobenzene	97		101		70-130	4		20
1,3-Dichlorobenzene	98		100		70-130	2		20
1,4-Dichlorobenzene	96		98		70-130	2		20
Methyl tert butyl ether	92		102		63-130	10		20
p/m-Xylene	108		108		70-130	0		20
o-Xylene	110		110		70-130	0		20
cis-1,2-Dichloroethene	101		104		70-130	3		20
Dibromomethane	105		109		70-130	4		20
1,2,3-Trichloropropane	89		94		64-130	5		20
Acrylonitrile	102		117		70-130	14		20
Styrene	111		110		70-130	1		20
Dichlorodifluoromethane	113		148	Q	36-147	27	Q	20
Acetone	111		131		58-148	17		20
Carbon disulfide	107		111		51-130	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG643772-1 WG643772-2								
2-Butanone	84		97		63-138	14		20
Vinyl acetate	77		90		70-130	16		20
4-Methyl-2-pentanone	85		96		59-130	12		20
2-Hexanone	79		93		57-130	16		20
Bromochloromethane	102		105		70-130	3		20
2,2-Dichloropropane	109		115		63-133	5		20
1,2-Dibromoethane	95		100		70-130	5		20
1,3-Dichloropropane	99		105		70-130	6		20
1,1,1,2-Tetrachloroethane	115		116		64-130	1		20
Bromobenzene	95		97		70-130	2		20
n-Butylbenzene	103		102		53-136	1		20
sec-Butylbenzene	103		103		70-130	0		20
tert-Butylbenzene	101		102		70-130	1		20
o-Chlorotoluene	98		99		70-130	1		20
p-Chlorotoluene	99		99		70-130	0		20
1,2-Dibromo-3-chloropropane	95		113		41-144	17		20
Hexachlorobutadiene	108		117		63-130	8		20
Isopropylbenzene	112		111		70-130	1		20
p-Isopropyltoluene	104		104		70-130	0		20
Naphthalene	82		100		70-130	20		20
n-Propylbenzene	97		100		69-130	3		20

Lab Control Sample Analysis

Batch Quality Control

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

Lab Number: L1320135
Report Date: 10/15/13

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG643772-1 WG643772-2								
1,2,3-Trichlorobenzene	88		107		70-130	19		20
1,2,4-Trichlorobenzene	87		101		70-130	15		20
1,3,5-Trimethylbenzene	102		100		64-130	2		20
1,2,4-Trimethylbenzene	102		103		70-130	1		20
1,4-Dioxane	110		123		56-162	11		20
1,4-Diethylbenzene	99		105		70-130	6		20
4-Ethyltoluene	100		102		70-130	2		20
1,2,4,5-Tetramethylbenzene	104		104		70-130	0		20
Ethyl ether	93		101		59-134	8		20
trans-1,4-Dichloro-2-butene	84		93		70-130	10		20

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
1,2-Dichloroethane-d4	117		116		70-130
Toluene-d8	101		100		70-130
4-Bromofluorobenzene	92		94		70-130
Dibromofluoromethane	109		108		70-130

SEMIVOLATILES

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

SAMPLE RESULTS

Lab ID: L1320135-01 D
 Client ID: MW-S2-100813
 Sample Location: MANHATTAN, NY
 Matrix: Water
 Analytical Method: 1,8270D
 Analytical Date: 10/15/13 13:18
 Analyst: PS

Date Collected: 10/08/13 12:45
 Date Received: 10/08/13
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 10/10/13 03:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	25	3.3	5
Bis(2-chloroethyl)ether	ND		ug/l	10	1.9	5
1,2-Dichlorobenzene	ND		ug/l	10	2.7	5
1,3-Dichlorobenzene	ND		ug/l	10	2.7	5
1,4-Dichlorobenzene	ND		ug/l	10	2.8	5
3,3'-Dichlorobenzidine	ND		ug/l	25	4.3	5
2,4-Dinitrotoluene	ND		ug/l	25	2.2	5
2,6-Dinitrotoluene	ND		ug/l	25	2.3	5
4-Chlorophenyl phenyl ether	ND		ug/l	10	3.0	5
4-Bromophenyl phenyl ether	ND		ug/l	10	3.4	5
Bis(2-chloroisopropyl)ether	ND		ug/l	10	2.5	5
Bis(2-chloroethoxy)methane	ND		ug/l	25	2.0	5
Hexachlorocyclopentadiene	ND		ug/l	100	10.	5
Isophorone	ND		ug/l	25	1.7	5
Nitrobenzene	ND		ug/l	10	2.5	5
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	10	3.5	5
n-Nitrosodi-n-propylamine	ND		ug/l	25	2.0	5
Bis(2-Ethylhexyl)phthalate	ND		ug/l	15	7.0	5
Butyl benzyl phthalate	ND		ug/l	25	2.3	5
Di-n-butylphthalate	ND		ug/l	25	2.7	5
Di-n-octylphthalate	ND		ug/l	25	2.7	5
Diethyl phthalate	ND		ug/l	25	2.2	5
Dimethyl phthalate	ND		ug/l	25	2.2	5
Biphenyl	13		ug/l	10	2.5	5
4-Chloroaniline	ND		ug/l	25	4.1	5
2-Nitroaniline	ND		ug/l	25	2.0	5
3-Nitroaniline	ND		ug/l	25	3.0	5
4-Nitroaniline	ND		ug/l	25	2.8	5
Dibenzofuran	10		ug/l	10	2.4	5
1,2,4,5-Tetrachlorobenzene	ND		ug/l	50	3.3	5
Acetophenone	ND		ug/l	25	2.8	5

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

SAMPLE RESULTS

Lab ID: L1320135-01 D
 Client ID: MW-S2-100813
 Sample Location: MANHATTAN, NY

Date Collected: 10/08/13 12:45
 Date Received: 10/08/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,6-Trichlorophenol	ND		ug/l	25	2.2	5
P-Chloro-M-Cresol	ND		ug/l	10	2.5	5
2-Chlorophenol	ND		ug/l	10	1.7	5
2,4-Dichlorophenol	ND		ug/l	25	2.1	5
2,4-Dimethylphenol	ND		ug/l	25	6.2	5
2-Nitrophenol	ND		ug/l	50	2.4	5
4-Nitrophenol	ND		ug/l	50	6.1	5
2,4-Dinitrophenol	ND		ug/l	100	7.0	5
4,6-Dinitro-o-cresol	ND		ug/l	50	2.9	5
Phenol	ND		ug/l	25	1.3	5
2-Methylphenol	ND		ug/l	25	2.6	5
3-Methylphenol/4-Methylphenol	ND		ug/l	25	2.4	5
2,4,5-Trichlorophenol	ND		ug/l	25	2.2	5
Benzoic Acid	ND		ug/l	250	5.0	5
Benzyl Alcohol	ND		ug/l	10	2.4	5
Carbazole	22		ug/l	10	2.6	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		21-120
Phenol-d6	24		10-120
Nitrobenzene-d5	104		23-120
2-Fluorobiphenyl	94		15-120
2,4,6-Tribromophenol	91		10-120
4-Terphenyl-d14	94		41-149

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

SAMPLE RESULTS

Lab ID: L1320135-01 D
 Client ID: MW-S2-100813
 Sample Location: MANHATTAN, NY
 Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 10/12/13 03:02
 Analyst: HL

Date Collected: 10/08/13 12:45
 Date Received: 10/08/13
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 10/10/13 03:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	39		ug/l	1.0	0.32	5
2-Chloronaphthalene	ND		ug/l	1.0	0.33	5
Fluoranthene	15		ug/l	1.0	0.22	5
Hexachlorobutadiene	ND		ug/l	2.5	0.36	5
Naphthalene	51		ug/l	1.0	0.32	5
Benzo(a)anthracene	6.5		ug/l	1.0	0.28	5
Benzo(a)pyrene	6.4		ug/l	1.0	0.34	5
Benzo(b)fluoranthene	4.7		ug/l	1.0	0.36	5
Benzo(k)fluoranthene	3.3		ug/l	1.0	0.34	5
Chrysene	6.0		ug/l	1.0	0.24	5
Acenaphthylene	5.9		ug/l	1.0	0.25	5
Anthracene	6.0		ug/l	1.0	0.32	5
Benzo(ghi)perylene	4.7		ug/l	1.0	0.35	5
Fluorene	16		ug/l	1.0	0.28	5
Phenanthrene	11		ug/l	1.0	0.32	5
Dibenzo(a,h)anthracene	0.84	J	ug/l	1.0	0.36	5
Indeno(1,2,3-cd)Pyrene	3.1		ug/l	1.0	0.40	5
Pyrene	21		ug/l	1.0	0.28	5
2-Methylnaphthalene	ND		ug/l	1.0	0.30	5
Pentachlorophenol	ND		ug/l	4.0	0.94	5
Hexachlorobenzene	ND		ug/l	4.0	0.07	5
Hexachloroethane	ND		ug/l	4.0	0.32	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	34		21-120
Phenol-d6	18		10-120
Nitrobenzene-d5	89		23-120
2-Fluorobiphenyl	110		15-120
2,4,6-Tribromophenol	111		10-120
4-Terphenyl-d14	117		41-149

Project Name: RIVER PLACE I+II**Lab Number:** L1320135**Project Number:** 170040901**Report Date:** 10/15/13**SAMPLE RESULTS**

Lab ID: L1320135-02 D2
Client ID: MW-N2-100813
Sample Location: MANHATTAN, NY
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 10/15/13 09:48
Analyst: HL

Date Collected: 10/08/13 14:20
Date Received: 10/08/13
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/10/13 03:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	2800		ug/l	50	16.	250

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

SAMPLE RESULTS

Lab ID: L1320135-02 D
 Client ID: MW-N2-100813
 Sample Location: MANHATTAN, NY
 Matrix: Water
 Analytical Method: 1,8270D
 Analytical Date: 10/15/13 13:42
 Analyst: PS

Date Collected: 10/08/13 14:20
 Date Received: 10/08/13
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 10/10/13 03:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	25	3.3	5
Bis(2-chloroethyl)ether	ND		ug/l	10	1.9	5
1,2-Dichlorobenzene	ND		ug/l	10	2.7	5
1,3-Dichlorobenzene	ND		ug/l	10	2.7	5
1,4-Dichlorobenzene	ND		ug/l	10	2.8	5
3,3'-Dichlorobenzidine	ND		ug/l	25	4.3	5
2,4-Dinitrotoluene	ND		ug/l	25	2.2	5
2,6-Dinitrotoluene	ND		ug/l	25	2.3	5
4-Chlorophenyl phenyl ether	ND		ug/l	10	3.0	5
4-Bromophenyl phenyl ether	ND		ug/l	10	3.4	5
Bis(2-chloroisopropyl)ether	ND		ug/l	10	2.5	5
Bis(2-chloroethoxy)methane	ND		ug/l	25	2.0	5
Hexachlorocyclopentadiene	ND		ug/l	100	10.	5
Isophorone	ND		ug/l	25	1.7	5
Nitrobenzene	ND		ug/l	10	2.5	5
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	10	3.5	5
n-Nitrosodi-n-propylamine	ND		ug/l	25	2.0	5
Bis(2-Ethylhexyl)phthalate	ND		ug/l	15	7.0	5
Butyl benzyl phthalate	ND		ug/l	25	2.3	5
Di-n-butylphthalate	ND		ug/l	25	2.7	5
Di-n-octylphthalate	ND		ug/l	25	2.7	5
Diethyl phthalate	ND		ug/l	25	2.2	5
Dimethyl phthalate	ND		ug/l	25	2.2	5
Biphenyl	28		ug/l	10	2.5	5
4-Chloroaniline	ND		ug/l	25	4.1	5
2-Nitroaniline	ND		ug/l	25	2.0	5
3-Nitroaniline	ND		ug/l	25	3.0	5
4-Nitroaniline	ND		ug/l	25	2.8	5
Dibenzofuran	41		ug/l	10	2.4	5
1,2,4,5-Tetrachlorobenzene	ND		ug/l	50	3.3	5
Acetophenone	ND		ug/l	25	2.8	5

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

SAMPLE RESULTS

Lab ID: L1320135-02 D

Date Collected: 10/08/13 14:20

Client ID: MW-N2-100813

Date Received: 10/08/13

Sample Location: MANHATTAN, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,6-Trichlorophenol	ND		ug/l	25	2.2	5
P-Chloro-M-Cresol	ND		ug/l	10	2.5	5
2-Chlorophenol	ND		ug/l	10	1.7	5
2,4-Dichlorophenol	ND		ug/l	25	2.1	5
2,4-Dimethylphenol	89		ug/l	25	6.2	5
2-Nitrophenol	ND		ug/l	50	2.4	5
4-Nitrophenol	ND		ug/l	50	6.1	5
2,4-Dinitrophenol	ND		ug/l	100	7.0	5
4,6-Dinitro-o-cresol	ND		ug/l	50	2.9	5
Phenol	ND		ug/l	25	1.3	5
2-Methylphenol	ND		ug/l	25	2.6	5
3-Methylphenol/4-Methylphenol	ND		ug/l	25	2.4	5
2,4,5-Trichlorophenol	ND		ug/l	25	2.2	5
Benzoic Acid	ND		ug/l	250	5.0	5
Benzyl Alcohol	ND		ug/l	10	2.4	5
Carbazole	110		ug/l	10	2.6	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		21-120
Phenol-d6	28		10-120
Nitrobenzene-d5	100		23-120
2-Fluorobiphenyl	89		15-120
2,4,6-Tribromophenol	101		10-120
4-Terphenyl-d14	89		41-149

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

SAMPLE RESULTS

Lab ID: L1320135-02 D
 Client ID: MW-N2-100813
 Sample Location: MANHATTAN, NY
 Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 10/12/13 03:30
 Analyst: HL

Date Collected: 10/08/13 14:20
 Date Received: 10/08/13
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 10/10/13 03:43

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	96		ug/l	1.0	0.32	5
2-Chloronaphthalene	ND		ug/l	1.0	0.33	5
Fluoranthene	7.3		ug/l	1.0	0.22	5
Hexachlorobutadiene	ND		ug/l	2.5	0.36	5
Naphthalene	740	E	ug/l	1.0	0.32	5
Benzo(a)anthracene	1.5		ug/l	1.0	0.28	5
Benzo(a)pyrene	1.2		ug/l	1.0	0.34	5
Benzo(b)fluoranthene	1.2		ug/l	1.0	0.36	5
Benzo(k)fluoranthene	0.80	J	ug/l	1.0	0.34	5
Chrysene	1.0		ug/l	1.0	0.24	5
Acenaphthylene	6.9		ug/l	1.0	0.25	5
Anthracene	4.8		ug/l	1.0	0.32	5
Benzo(ghi)perylene	0.74	J	ug/l	1.0	0.35	5
Fluorene	29		ug/l	1.0	0.28	5
Phenanthrene	33		ug/l	1.0	0.32	5
Dibenzo(a,h)anthracene	ND		ug/l	1.0	0.36	5
Indeno(1,2,3-cd)Pyrene	0.64	J	ug/l	1.0	0.40	5
Pyrene	5.2		ug/l	1.0	0.28	5
2-Methylnaphthalene	40		ug/l	1.0	0.30	5
Pentachlorophenol	ND		ug/l	4.0	0.94	5
Hexachlorobenzene	ND		ug/l	4.0	0.07	5
Hexachloroethane	ND		ug/l	4.0	0.32	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		21-120
Phenol-d6	22		10-120
Nitrobenzene-d5	87		23-120
2-Fluorobiphenyl	97		15-120
2,4,6-Tribromophenol	114		10-120
4-Terphenyl-d14	113		41-149

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

Lab Number: L1320135
Report Date: 10/15/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 10/12/13 00:15
Analyst: HL

Extraction Method: EPA 3510C
Extraction Date: 10/10/13 03:43

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG642708-1					
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: L1320135
Report Date: 10/15/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 10/12/13 00:15
Analyst: HL

Extraction Method: EPA 3510C
Extraction Date: 10/10/13 03:43

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG642708-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	38		21-120
Phenol-d6	22		10-120
Nitrobenzene-d5	86		23-120
2-Fluorobiphenyl	94		15-120
2,4,6-Tribromophenol	126	Q	10-120
4-Terphenyl-d14	116		41-149

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

Lab Number: L1320135
Report Date: 10/15/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/13/13 19:36
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 10/10/13 03:42

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG642712-1					
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.67
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39
1,2-Dichlorobenzene	ND		ug/l	2.0	0.55
1,3-Dichlorobenzene	ND		ug/l	2.0	0.55
1,4-Dichlorobenzene	ND		ug/l	2.0	0.55
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.85
2,4-Dinitrotoluene	ND		ug/l	5.0	0.45
2,6-Dinitrotoluene	ND		ug/l	5.0	0.46
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.61
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.67
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.50
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.40
Hexachlorocyclopentadiene	ND		ug/l	20	2.1
Isophorone	ND		ug/l	5.0	0.35
Nitrobenzene	ND		ug/l	2.0	0.50
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.70
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.39
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	1.4
Butyl benzyl phthalate	ND		ug/l	5.0	0.46
Di-n-butylphthalate	ND		ug/l	5.0	0.54
Di-n-octylphthalate	ND		ug/l	5.0	0.53
Diethyl phthalate	ND		ug/l	5.0	0.45
Dimethyl phthalate	ND		ug/l	5.0	0.45
Biphenyl	ND		ug/l	2.0	0.50
4-Chloroaniline	ND		ug/l	5.0	0.83
2-Nitroaniline	ND		ug/l	5.0	0.40
3-Nitroaniline	ND		ug/l	5.0	0.59
4-Nitroaniline	ND		ug/l	5.0	0.55
Dibenzofuran	ND		ug/l	2.0	0.47
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.65
Acetophenone	ND		ug/l	5.0	0.55

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

Lab Number: L1320135
Report Date: 10/15/13

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8270D
Analytical Date: 10/13/13 19:36
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 10/10/13 03:42

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG642712-1					
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.45
P-Chloro-M-Cresol	ND		ug/l	2.0	0.50
2-Chlorophenol	ND		ug/l	2.0	0.34
2,4-Dichlorophenol	ND		ug/l	5.0	0.43
2,4-Dimethylphenol	ND		ug/l	5.0	1.2
2-Nitrophenol	ND		ug/l	10	0.48
4-Nitrophenol	ND		ug/l	10	1.2
2,4-Dinitrophenol	ND		ug/l	20	1.4
4,6-Dinitro-o-cresol	ND		ug/l	10	0.59
Phenol	ND		ug/l	5.0	0.26
2-Methylphenol	ND		ug/l	5.0	0.53
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.47
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.45
Benzoic Acid	ND		ug/l	50	1.0
Benzyl Alcohol	ND		ug/l	2.0	0.47
Carbazole	ND		ug/l	2.0	0.53

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		21-120
Phenol-d6	23		10-120
Nitrobenzene-d5	89		23-120
2-Fluorobiphenyl	86		15-120
2,4,6-Tribromophenol	95		10-120
4-Terphenyl-d14	97		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

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: WG642708-2 WG642708-3								
Acenaphthene	91		91		37-111	0		40
2-Chloronaphthalene	95		95		40-140	0		40
Fluoranthene	106		110		40-140	4		40
Hexachlorobutadiene	78		80		40-140	3		40
Naphthalene	85		87		40-140	2		40
Benzo(a)anthracene	97		103		40-140	6		40
Benzo(a)pyrene	87		96		40-140	10		40
Benzo(b)fluoranthene	82		108		40-140	27		40
Benzo(k)fluoranthene	106		98		40-140	8		40
Chrysene	92		98		40-140	6		40
Acenaphthylene	107		108		40-140	1		40
Anthracene	94		98		40-140	4		40
Benzo(ghi)perylene	75		101		40-140	30		40
Fluorene	102		105		40-140	3		40
Phenanthrene	92		94		40-140	2		40
Dibenzo(a,h)anthracene	82		103		40-140	23		40
Indeno(1,2,3-cd)Pyrene	81		104		40-140	25		40
Pyrene	103		106		26-127	3		40
2-Methylnaphthalene	88		87		40-140	1		40
Pentachlorophenol	77		87		9-103	12		40
Hexachlorobenzene	103		108		40-140	5		40

Lab Control Sample Analysis Batch Quality Control

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

Lab Number: L1320135
Report Date: 10/15/13

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: WG642708-2 WG642708-3								
Hexachloroethane	66		69		40-140	4		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	42		43		21-120
Phenol-d6	25		25		10-120
Nitrobenzene-d5	93		97		23-120
2-Fluorobiphenyl	108		109		15-120
2,4,6-Tribromophenol	140	Q	147	Q	10-120
4-Terphenyl-d14	126		133		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

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: WG642712-2 WG642712-3								
1,2,4-Trichlorobenzene	80		82		39-98	2		30
Bis(2-chloroethyl)ether	83		92		40-140	10		30
1,2-Dichlorobenzene	75		75		40-140	0		30
1,3-Dichlorobenzene	70		72		40-140	3		30
1,4-Dichlorobenzene	73		74		36-97	1		30
3,3'-Dichlorobenzidine	65		68		40-140	5		30
2,4-Dinitrotoluene	88		101	Q	24-96	14		30
2,6-Dinitrotoluene	86		96		40-140	11		30
4-Chlorophenyl phenyl ether	97		104		40-140	7		30
4-Bromophenyl phenyl ether	94		103		40-140	9		30
Bis(2-chloroisopropyl)ether	82		91		40-140	10		30
Bis(2-chloroethoxy)methane	82		91		40-140	10		30
Hexachlorocyclopentadiene	49		50		40-140	2		30
Isophorone	85		99		40-140	15		30
Nitrobenzene	97		103		40-140	6		30
NitrosoDiPhenylAmine(NDPA)/DPA	91		102		40-140	11		30
n-Nitrosodi-n-propylamine	90		102		29-132	13		30
Bis(2-Ethylhexyl)phthalate	112		118		40-140	5		30
Butyl benzyl phthalate	89		99		40-140	11		30
Di-n-butylphthalate	99		110		40-140	11		30
Di-n-octylphthalate	104		114		40-140	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

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: WG642712-2 WG642712-3								
Diethyl phthalate	94		102		40-140	8		30
Dimethyl phthalate	94		104		40-140	10		30
Biphenyl	91		100			9		30
4-Chloroaniline	56		69		40-140	21		30
2-Nitroaniline	82		92		52-143	11		30
3-Nitroaniline	54		64		25-145	17		30
4-Nitroaniline	70		84		51-143	18		30
Dibenzofuran	95		104		40-140	9		30
1,2,4,5-Tetrachlorobenzene	108		114		2-134	5		30
Acetophenone	87		97		39-129	11		30
2,4,6-Trichlorophenol	85		96		30-130	12		30
P-Chloro-M-Cresol	79		90		23-97	13		30
2-Chlorophenol	72		81		27-123	12		30
2,4-Dichlorophenol	88		98		30-130	11		30
2,4-Dimethylphenol	71		77		30-130	8		30
2-Nitrophenol	86		95		30-130	10		30
4-Nitrophenol	30		34		10-80	13		30
2,4-Dinitrophenol	31		41		20-130	28		30
4,6-Dinitro-o-cresol	66		82		20-164	22		30
Phenol	26		30		12-110	14		30
2-Methylphenol	55		63		30-130	14		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

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: WG642712-2 WG642712-3								
3-Methylphenol/4-Methylphenol	56		64		30-130	13		30
2,4,5-Trichlorophenol	84		98		30-130	15		30
Benzoic Acid	2		2			9		30
Benzyl Alcohol	54		64			17		30
Carbazole	94		106		55-144	12		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	43		48		21-120
Phenol-d6	26		31		10-120
Nitrobenzene-d5	97		109		23-120
2-Fluorobiphenyl	101		115		15-120
2,4,6-Tribromophenol	111		128	Q	10-120
4-Terphenyl-d14	93		108		41-149

METALS

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

Lab Number: L1320135
Report Date: 10/15/13

SAMPLE RESULTS

Lab ID: L1320135-01
 Client ID: MW-S2-100813
 Sample Location: MANHATTAN, NY
 Matrix: Water

Date Collected: 10/08/13 12:45
 Date Received: 10/08/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	1.96		mg/l	0.200	0.0400	20	10/12/13 10:30	10/14/13 20:20	EPA 3005A	1,6020A	BM
Antimony, Total	0.00028	J	mg/l	0.00100	0.00010	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Arsenic, Total	0.00904		mg/l	0.00050	0.00020	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Barium, Total	0.1727		mg/l	0.00050	0.00010	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Beryllium, Total	0.00016	J	mg/l	0.00050	0.00010	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Cadmium, Total	0.00012	J	mg/l	0.00020	0.00005	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Calcium, Total	201.		mg/l	2.00	0.640	20	10/12/13 10:30	10/14/13 20:20	EPA 3005A	1,6020A	BM
Chromium, Total	0.00611		mg/l	0.00100	0.00020	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Cobalt, Total	0.00457		mg/l	0.00050	0.00010	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Copper, Total	0.01026		mg/l	0.00100	0.00010	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Iron, Total	5.83		mg/l	0.0500	0.0130	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Lead, Total	0.07029		mg/l	0.00100	0.00020	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Magnesium, Total	53.8		mg/l	1.40	0.460	20	10/12/13 10:30	10/14/13 20:20	EPA 3005A	1,6020A	BM
Manganese, Total	0.2796		mg/l	0.00050	0.00010	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	10/10/13 08:00	10/10/13 13:43	EPA 7470A	1,7470A	DR
Nickel, Total	0.00602		mg/l	0.00050	0.00010	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Potassium, Total	19.8		mg/l	0.100	0.0270	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Selenium, Total	0.00215	J	mg/l	0.00500	0.00030	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Silver, Total	ND		mg/l	0.00040	0.00010	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Sodium, Total	49.4		mg/l	2.00	0.300	20	10/12/13 10:30	10/14/13 20:20	EPA 3005A	1,6020A	BM
Thallium, Total	0.00003	J	mg/l	0.00050	0.00003	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Vanadium, Total	0.00651		mg/l	0.00500	0.00010	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM
Zinc, Total	0.02243		mg/l	0.01000	0.00120	1	10/12/13 10:30	10/15/13 02:41	EPA 3005A	1,6020A	BM



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

Lab Number: L1320135
Report Date: 10/15/13

SAMPLE RESULTS

Lab ID: L1320135-02
Client ID: MW-N2-100813
Sample Location: MANHATTAN, NY
Matrix: Water

Date Collected: 10/08/13 14:20
Date Received: 10/08/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	0.0341		mg/l	0.0100	0.00200	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Antimony, Total	0.00047	J	mg/l	0.00100	0.00010	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Arsenic, Total	0.00678		mg/l	0.00050	0.00020	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Barium, Total	0.2345		mg/l	0.00050	0.00010	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Calcium, Total	209.		mg/l	2.00	0.640	20	10/12/13 10:30	10/14/13 20:27	EPA 3005A	1,6020A	BM
Chromium, Total	0.00130		mg/l	0.00100	0.00020	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Cobalt, Total	0.00829		mg/l	0.00050	0.00010	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Copper, Total	0.00169		mg/l	0.00100	0.00010	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Iron, Total	1.78		mg/l	0.0500	0.0130	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Lead, Total	0.00179		mg/l	0.00100	0.00020	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Magnesium, Total	57.7		mg/l	1.40	0.460	20	10/12/13 10:30	10/14/13 20:27	EPA 3005A	1,6020A	BM
Manganese, Total	0.3375		mg/l	0.00050	0.00010	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	10/10/13 08:00	10/10/13 13:49	EPA 7470A	1,7470A	DR
Nickel, Total	0.00298		mg/l	0.00050	0.00010	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Potassium, Total	27.8		mg/l	0.100	0.0270	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Selenium, Total	0.00418	J	mg/l	0.00500	0.00030	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Silver, Total	ND		mg/l	0.00040	0.00010	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Sodium, Total	175.		mg/l	2.00	0.300	20	10/12/13 10:30	10/14/13 20:27	EPA 3005A	1,6020A	BM
Thallium, Total	ND		mg/l	0.00050	0.00003	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Vanadium, Total	0.00329	J	mg/l	0.00500	0.00010	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM
Zinc, Total	0.01730		mg/l	0.01000	0.00120	1	10/12/13 10:30	10/15/13 02:47	EPA 3005A	1,6020A	BM



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

Lab Number: L1320135
Report Date: 10/15/13

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: WG642730-1										
Mercury, Total	ND		mg/l	0.00020	0.00006	1	10/10/13 08:00	10/10/13 13:28	1,7470A	DR

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: WG643449-1										
Aluminum, Total	ND		mg/l	0.0100	0.00200	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Antimony, Total	0.00019	J	mg/l	0.00100	0.00010	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Arsenic, Total	ND		mg/l	0.00050	0.00020	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Barium, Total	ND		mg/l	0.00050	0.00010	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Calcium, Total	ND		mg/l	0.100	0.0320	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Chromium, Total	0.00047	J	mg/l	0.00100	0.00020	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Cobalt, Total	ND		mg/l	0.00050	0.00010	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Copper, Total	ND		mg/l	0.00100	0.00010	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Iron, Total	ND		mg/l	0.0500	0.0130	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Lead, Total	ND		mg/l	0.00100	0.00020	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Magnesium, Total	ND		mg/l	0.0700	0.0230	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Manganese, Total	ND		mg/l	0.00050	0.00010	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Nickel, Total	ND		mg/l	0.00050	0.00010	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Potassium, Total	ND		mg/l	0.100	0.0270	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Selenium, Total	ND		mg/l	0.00500	0.00030	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Silver, Total	ND		mg/l	0.00040	0.00010	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Sodium, Total	ND		mg/l	0.100	0.0150	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Thallium, Total	ND		mg/l	0.00050	0.00003	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Vanadium, Total	ND		mg/l	0.00500	0.00010	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM
Zinc, Total	ND		mg/l	0.01000	0.00120	1	10/12/13 10:30	10/14/13 19:43	1,6020A	BM

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

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: L1320135
Report Date: 10/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 Batch: WG642730-2								
Mercury, Total	114		-		80-120	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 Batch: WG643449-2					
Aluminum, Total	106	-	80-120	-	
Antimony, Total	92	-	80-120	-	
Arsenic, Total	104	-	80-120	-	
Barium, Total	101	-	80-120	-	
Beryllium, Total	103	-	80-120	-	
Cadmium, Total	107	-	80-120	-	
Calcium, Total	106	-	80-120	-	
Chromium, Total	99	-	80-120	-	
Cobalt, Total	102	-	80-120	-	
Copper, Total	101	-	80-120	-	
Iron, Total	98	-	80-120	-	
Lead, Total	104	-	80-120	-	
Magnesium, Total	110	-	80-120	-	
Manganese, Total	114	-	80-120	-	
Nickel, Total	101	-	80-120	-	
Potassium, Total	107	-	80-120	-	
Selenium, Total	107	-	80-120	-	
Silver, Total	99	-	80-120	-	
Sodium, Total	112	-	80-120	-	
Thallium, Total	98	-	80-120	-	
Vanadium, Total	99	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 Batch: WG643449-2					
Zinc, Total	106	-	80-120	-	

Matrix Spike Analysis
Batch Quality Control

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

Lab Number: L1320135
Report Date: 10/15/13

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: WG642730-4 QC Sample: L1319857-01 Client ID: MS Sample											
Mercury, Total	ND	0.005	0.00605	121		-	-		70-130	-	20

Matrix Spike Analysis Batch Quality Control

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

Lab Number: L1320135
Report Date: 10/15/13

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: WG643449-3 WG643449-4 QC Sample: L1320138-01 Client ID: MS Sample									
Aluminum, Total	0.122	2	2.24	106	2.32	110	80-120	4	20
Antimony, Total	0.00011J	0.5	0.4741	95	0.3673	73	Q 80-120	25	Q 20
Arsenic, Total	0.00058	0.12	0.1309	109	0.1198	100	80-120	9	20
Barium, Total	0.03407	2	2.058	101	2.172	107	80-120	5	20
Beryllium, Total	ND	0.05	0.05037	101	0.05337	107	80-120	6	20
Cadmium, Total	0.00015J	0.051	0.05520	108	0.05825	114	80-120	5	20
Calcium, Total	76.2	10	85.4	92	90.2	140	Q 80-120	5	20
Chromium, Total	0.00176	0.2	0.1988	99	0.2079	104	80-120	4	20
Cobalt, Total	0.00130	0.5	0.5132	103	0.5327	106	80-120	4	20
Copper, Total	0.00544	0.25	0.2543	102	0.2627	105	80-120	3	20
Iron, Total	0.513	1	1.63	107	1.60	104	80-120	2	20
Lead, Total	0.00086J	0.51	0.5357	105	0.5568	109	80-120	4	20
Magnesium, Total	15.8	10	28.6	106	29.8	118	80-120	4	20
Manganese, Total	1.303	0.5	1.802	100	1.877	115	80-120	4	20
Nickel, Total	0.00338	0.5	0.5041	101	0.5240	105	80-120	4	20
Potassium, Total	7.93	10	19.2	105	19.8	111	80-120	3	20
Selenium, Total	0.00165J	0.12	0.139	116	0.133	111	80-120	4	20
Silver, Total	ND	0.05	0.04957	99	0.03225	64	Q 80-120	42	Q 20
Sodium, Total	87.0	10	96.1	91	102	150	Q 80-120	6	20
Thallium, Total	0.00007J	0.12	0.1212	101	0.1260	105	80-120	4	20
Vanadium, Total	0.00048J	0.5	0.5003	100	0.5141	103	80-120	3	20

Matrix Spike Analysis
Batch Quality Control

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

Lab Number: L1320135
Report Date: 10/15/13

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: WG643449-3 WG643449-4 QC Sample: L1320138-01 Client ID: MS Sample									
Zinc, Total	0.02846	0.5	0.5516	110	0.5733	115	80-120	4	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: RIVER PLACE I+II

Project Number: 170040901

Lab Number: L1320135

Report Date: 10/15/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG642730-3 QC Sample: L1319857-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS & MISCELLANEOUS

Project Name: RIVER PLACE I+II

Lab Number: L1320135

Project Number: 170040901

Report Date: 10/15/13

SAMPLE RESULTS

Lab ID: L1320135-01
 Client ID: MW-S2-100813
 Sample Location: MANHATTAN, NY
 Matrix: Water

Date Collected: 10/08/13 12:45
 Date Received: 10/08/13
 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	1.03		mg/l	0.025	0.006	5	10/11/13 13:15	10/11/13 16:00	1,9010C/9012A	JO



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

Lab Number: L1320135
Report Date: 10/15/13

SAMPLE RESULTS

Lab ID: L1320135-02
Client ID: MW-N2-100813
Sample Location: MANHATTAN, NY
Matrix: Water

Date Collected: 10/08/13 14:20
Date Received: 10/08/13
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	1.21		mg/l	0.025	0.006	5	10/11/13 13:15	10/11/13 16:01	1,9010C/9012A	JO



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

Lab Number: L1320135
Report Date: 10/15/13

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: WG643212-1									
Cyanide, Total	ND	mg/l	0.005	0.001	1	10/11/13 13:15	10/11/13 15:54	1,9010C/9012A	JO

Lab Control Sample Analysis Batch Quality Control

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

Lab Number: L1320135
Report Date: 10/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG643212-2 WG643212-3								
Cyanide, Total	100		102		80-120	2		20

Matrix Spike Analysis
Batch Quality Control

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

Lab Number: L1320135
Report Date: 10/15/13

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: WG643212-4 WG643212-5 QC Sample: L1320138-01 Client ID: MS Sample												
Cyanide, Total	0.003J	0.2	0.194	97		0.196	98		80-120	1		20

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

Lab Number: L1320135
Report Date: 10/15/13

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(*)
L1320135-01A	Vial HCl preserved	A	N/A	3.8	Y	Absent	NYTCL-8260(14)
L1320135-01B	Vial HCl preserved	A	N/A	3.8	Y	Absent	NYTCL-8260(14)
L1320135-01C	Vial HCl preserved	A	N/A	3.8	Y	Absent	NYTCL-8260(14)
L1320135-01D	Plastic 500ml HNO3 preserved	A	<2	3.8	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)
L1320135-01E	Plastic 250ml NaOH preserved	A	>12	3.8	Y	Absent	TCN-9010(14)
L1320135-01F	Amber 1000ml unpreserved	A	7	3.8	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1320135-01G	Amber 1000ml unpreserved	A	7	3.8	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1320135-01H	Plastic 250ml NaOH preserved	A	>12	3.8	Y	Absent	TCN-9010(14)
L1320135-02A	Vial HCl preserved	A	N/A	3.8	Y	Absent	NYTCL-8260(14)
L1320135-02B	Vial HCl preserved	A	N/A	3.8	Y	Absent	NYTCL-8260(14)
L1320135-02C	Vial HCl preserved	A	N/A	3.8	Y	Absent	NYTCL-8260(14)
L1320135-02D	Plastic 500ml HNO3 preserved	A	<2	3.8	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)
L1320135-02E	Plastic 250ml NaOH preserved	A	>12	3.8	Y	Absent	TCN-9010(14)

*Values in parentheses indicate holding time in days

Project Name: RIVER PLACE I+II**Project Number:** 170040901**Lab Number:** L1320135**Report Date:** 10/15/13**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1320135-02F	Amber 1000ml unpreserved	A	7	3.8	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1320135-02G	Amber 1000ml unpreserved	A	7	3.8	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1320135-02H	Plastic 250ml NaOH preserved	A	>12	3.8	Y	Absent	TCN-9010(14)

*Values in parentheses indicate holding time in days

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

Lab Number: L1320135
Report Date: 10/15/13

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

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.
- 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.
- 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.

Report Format: DU Report with "J" Qualifiers



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

Lab Number: L1320135
Report Date: 10/15/13

Data Qualifiers

- 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 exceedences 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: L1320135
Report Date: 10/15/13

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

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.



Certificate/Approval Program Summary

Last revised October 1, 2013 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Selenium, Silver, Sodium, Thallium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223, Enumeration and P/A), E. Coli. – Colilert (SM9223, Enumeration and P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform-EC Medium (SM 9221E).

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), E. Coli – Colilert (SM9223 Enumeration), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterococcus - Enterolert.

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Dalapon, Volatile Organics (SW 8260), Acid Extractables (Phenols) (SW 8270), Benzidines (SW 8270), Phthalates (SW 8270), Nitrosamines (SW 8270), Nitroaromatics & Cyclic Ketones (SW 8270), PAHs (SW 8270), Haloethers (SW 8270), Chlorinated Hydrocarbons (SW 8270).)

State of Illinois Certificate/Lab ID: 003155. **NELAP Accredited.**

Drinking Water (Inorganic Parameters: SM2120B, 2320B, 2510B, 2540C, SM4500CN-CE, 4500F-C, 4500H-B, 4500NO3-F, 5310C, EPA 200.7, 200.8, 245.1, 300.0. Organic Parameters: EPA 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: SM2120B, 2310B, 2320B, 2340B, 2510B, 2540B, 2540C, 2540D, SM4500CL-E, 4500CN-E, 4500F-C, 4500H-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500P-E, 4500S-D, 4500SO3-B, 5210B, 5220D, 5310C, 5540C, EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1. Organic Parameters: EPA 608, 624, 625.)

Hazardous and Solid Waste (Inorganic Parameters: EPA 1010A, 1030, 1311, 1312, 6010C, 6020A, 7196A, 7470A, 7471B, 9012B, 9014, 9038, 9040C, 9045D, 9050A, 9065, 9251. Organic Parameters: 8011 (NPW only), 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8315A, 8330.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2120B, 2130B, 2320B, 2510C, 2540C, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, 5310C, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 8315A, 9010C, SM2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-C, 4500NH3-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500P-B, 4500P-E, 4500S2-D, 4500SO3-B, 5540C, 5210B, 5220D, 5310C, 9010B, 9030B, 9040C, 7470A, 7196A, 2340B, EPA 200.7, 6010C, 200.8, 6020A, 245.1, 1311, 1312, 3005A, Enterolert, 9223B, 9222D. Organic Parameters: 608, 624, 625, 8011, 8081B, 8082A, 8330, 8151A, 8260C, 8270D, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014, 9040B, 9045C, 6010C, 6020A, 7471B, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B, 9038, 9251. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260C, 8270D, 8330, 8151A, 8081B, 8082A, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5035.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

Non-Potable Water (Inorganic Parameters: (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: 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-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, SW-846 6010C, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9010C, 9030, 9040B, 9040C, SM2120B, 2310B, 2320B, 2340B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 4500SO3-B, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D, 3060A. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082A, 8081B, 8015C, 8151A, 8330, 8270D-SIM.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010C, 6020A, 7196A, 7471B, 1010, 1010A, 1030, 9010C, 9012B, 9014, 9030B, 9040C, 9045C, 9045D, 9050, 9065, 9251, 1311, 1312, 3005A, 3050B, 3060A. Organic Parameters: SW-846 3540C, 3546, 3050B, 3580A, 3620D, 3630C, 5030B, 5035, 8260C, 8270D, 8270D-SIM, 8330, 8151A, 8015B, 8015C, 8082A, 8081B.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2064. NELAP Accredited.

Drinking Water (Organic Parameters: **EPA 524.2**: Di-isopropyl ether (DIPE), Ethyl-t-butyl ether (ETBE), Tert-amyl methyl ether (TAME)).

Non-Potable Water (Organic Parameters: **EPA 8260C**: 1,3,5-Trichlorobenzene. **EPA 8015C(M)**: TPH.)

Solid & Chemical Materials (Organic Parameters: **EPA 8260C**: 1,3,5-Trichlorobenzene.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.1, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310C, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, 4500SO4-E, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, SW-846 9040B, 9040C, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010C, 9030B. Organic Parameters: SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 5030C, 8011, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ EPH.)

9050A, 9065, 9251. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5030C, 5035L, 5035H, NJ EPH.)

New York Department of Health Certificate/Lab ID: 11148. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.1, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO₃-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH₃-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO₃-F, 4500-NO₂-B, 4500P-E, 2340B, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010C, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 7470A, SM2120B, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 8315A, 3005A, 9010C, 9030B. Organic Parameters: EPA 624, 8260C, 8270D, 8270D-SIM, 625, 608, 8081B, 8151A, 8330A, 8082A, EPA 3510C, 5030B, 5030C, 8015C, 8011.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, EPA 6010C, 6020A, 7196A, 7471B, 8315A, 9012B, 9014, 9065, 9050A, 9038, 9251, EPA 1311, 1312, 3005A, 3050B, 9010C, 9030B, 9040C, 9045D. Organic Parameters: EPA 8260C, 8270D, 8270D-SIM, 8015C, 8081B, 8151A, 8330A, 8082A, 3540C, 3546, 3580A, 5035A-H, 5035A-L.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. (Inorganic Parameters: SM2310B, 2320B, 4500Cl-E, 4500Cn-E, 9012B, 9014, Lachat 10-204-00-1-X, 1010A, 1030, 4500NO₃-F, 353.2, 4500P-E, 4500SO₄-E, 300.0, 4500S-D, 5310B, 5310C, 6010C, 6020A, 200.7, 200.8, 3500Cr-B, 7196A, 245.1, 7470A, 7471B, 1311, 1312. Organic Parameters: 608, 8081B, 8082A, 624, 8260B, 625, 8270D, 8151A, 8015C, 504.1, MA-EPH, MA-VPH.)

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: 200.7, 200.8, 300.0, 332.0, 2120B, 2320B, 2510B, 2540C, 4500-CN-CE, 4500F-C, 4500H+-B, 4500NO₃-F, 5310C. Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1312, 3005A, 3015, 3060A, 200.7, 200.8, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P, BE, 245.1, 300.0, 350.1, 350.2, 351.1, 353.2, 420.1, 6010C, 6020A, 7196A, 7470A, 9030B, 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500CN-CE, 4500Cl-E, 4500F-B, 4500F-C, 4500H+-B, 4500NH₃-H, 4500NO₂-B, 4500NO₃-F, 4500S-D, 4500SO₃-B, 5310BCD, 5540C, 9010C, 9040C. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, 8015C, NJ-EPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3005A, 3050B, 3060A, 6010C, 6020A, 7196A, 7471B, 9010C, 9012B, 9014, 9040B, 9045D, 9050A, 9065, SM 4500NH₃-BH, 9030B, 9038, 9251. Organic Parameters: 3540C, 3546, 3580A, 3620C, 3630C, 5035, 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, NJ-EPH.)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. *NELAP Accredited via NJ-DEP.*

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commission on Environmental Quality Certificate/Lab ID: T104704476. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH₃-H, 4500NO₂B, 4500P-E, 4500 S²⁻ D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460195. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: EPA 200.7, 200.8, 300.0, 2510B, 2120B, 2540C, 4500CN-CE, 245.1, 2320B, 4500F-C, 4500NO₃-F, 4500H+B, 5310C. Organic Parameters: EPA 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 350.1, 351.1, 351.2, 3005A, 3015, 1312, 6010B, 6010C, 3060A, 353.2, 420.1, 2340B, 6020, 6020A, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X, 7196A, 7470A, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 3500Cr-D, 426C, 4500Cl-E, 4500F-B, 4500F-C,

4500NH3-H, 4500NO2-B, 4500NO3-F, 4500 SO3-B, 4500H-B, 4500PE, 510AC, 5210B, 5310B 5310C, 5540C, 9010Cm 9030B, 9040C. Organic Parameters: EPA 3510C, 3630C, 5030B, 8260B, 608, 624, 625, 8011, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330,)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, 3060A, 3050B, 1311, 1312, 6010B, 6010C, 6020, , 7196A, 7471A, 7471B, 6020A, 9010C, 9012B, 9030B, 9014, 9038, 9040C, 9045D, 9251, 9050A, 9065. Organic Parameters: EPA 5030B, 5035, 3540C, 3546, 3550B, 3580A, 3620C, 3630C, 6020A, 8260B, 8260C, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330.)

Department of Defense, L-A-B Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010C, 6020A, 245.1, 7470A, 9040B, 9010B, 180.1, 300.0, 332.0, 6860, 351.1, 353.2, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500Norg-C, 4500NO3-F, 5310C, 2130B, 2320B, 2340B, 2540C, 5540C, 3005A, 3015, 9056, 7196A, 3500-Cr-D. Organic Parameters: EPA 8015C, 8151A, 8260C, 8270D, 8270D-SIM, 8330A, 8082A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010C, 6020A, 7471A, 6860, 1311, 1312, 3050B, 7196A, 9040B, 9045C, 9010C, 9012B, 9251, SM3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8015C, 8151A, 8260C, 8270D, 8270D-SIM, 8330A/B-prep, 8082A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

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

EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether. **EPA 8260B:** 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8260 Non-potable water matrix:** Iodomethane (methyl iodide), Methyl methacrylate. **EPA 8260 Soil matrix:** Tert-amyl methyl ether (TAME), Diisopropyl ether (DIPE), Azobenzene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine. **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, TKN in a soil matrix, NO2 in a soil matrix, NO3 in a soil matrix. **EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.



WESTBORO, MA
 TEL: 508-898-9220
 FAX: 508-898-9193

MANSFIELD, MA
 TEL: 508-822-9300
 FAX: 508-822-3288

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd In Lab: 10/8/13

ALPHA Job #: L1320135

Project Information

Project Name: River Place 1 + 11

Project Location: Manhattan, NY

Project #: 170040901

Project Manager: Jason Hayes

ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due: 10/15/13 Time:

Report Information - Data Deliverables

FAX EMAIL
 ADEX Add'l Deliverables

Billing Information

Same as Client info PO #:

Client Information

Client: Langan Engineering

Address: 360 W. 31st Street

New York, NY 10001

Phone: 212.479.5400

Fax: 212.479.5444

Email: NRochna@Langan.com

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

metals = TAL

Regulatory Requirements/Report Limits

State /Fed Program Criteria

NYSDGC

ANALYSIS	SAMPLE HANDLING				TOTAL # BOTTLES
	Filtration	Done	Not needed	Lab to do	
VOCs		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SIVOCs		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metals		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Total CN		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS				Sample Specific Comments
		Date	Time			VOCs	SIVOCs	Metals	Total CN	
20135/1	MW-S2-100813	10/08/13	12:45	GW	BT	X	X	X	X	
2	MW-N2-100813	10/08/13	14:20	GW	BA	X	X	X	X	
3	TB01-100813	10/08/13	14:10	W	BT	X				

Container Type	
Preservative	

Relinquished By:	Date/Time	Received By:	Date/Time
Bette Howard	10/08/13 15:20	Tom Tolan	10-8-13 15:30
Tom Tolan	10-8-13 17:25	Richard Scott	10/8/13 17:25
Tom Tolan	10/8/13 2:30	Richard Scott	10/8/13 2:30

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



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MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 10/8/13
ALPHA Job #: L1320135

Client Information

Client: Langan Engineering
Address: 360 W. 31st Street
New York, NY 10001
Phone: 212.479.5400
Fax: 212.479.5444
Email: NRochna@Langan.com

These samples have been previously analyzed by Alpha

Project Information

Project Name: River Place 1 + 11
Project Location: Manhattan, NY
Project #: 170040901
Project Manager: Jason Hayes
ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)
Date Due: 10/15/13 Time:

Report Information - Data Deliverables

FAX EMAIL
 ADEX Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program	Criteria
NYSDEC	

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS	SAMPLE HANDLING				TOTAL # BOTTLES
	Filtration	Done	Not needed	Lab to do	
VOCs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SIVOCs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Total CN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Sample Specific Comments				

(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS				TOTAL # BOTTLES
		Date	Time			VOCs	SIVOCs	Metals	Total CN	
201351	MW-S2-100813	10/08/13	12:45	GW	BH	X	X	X	X	
2	MW-N2-100813	10/08/13	14:20	GW	BA	X	X	X	X	
3	TB01-100813	10/08/13	14:40	w	BH	X				

Container Type	
Preservative	

Relinquished By:	Date/Time	Received By:	Date/Time
Bette Howard	10/08/13 15:20	[Signature]	10-8-13 15:30
[Signature]	10-8-13 17:25	Tom Tolan	10/8/13 17:25
Tom Tolan	10/8/13 2:30	Richard Scott	10/4/13 2:30

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



ANALYTICAL REPORT

Lab Number:	L1321434
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Jason Hayes
Phone:	(212) 479-5427
Project Name:	RIVER PLACE I+II
Project Number:	170040901
Report Date:	10/28/13

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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: L1321434
Report Date: 10/28/13

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1321434-01	MW-S2-100813	MANHATTAN, NY	10/08/13 12:45
L1321434-02	MW-N2-100813	MANHATTAN, NY	10/08/13 14:20

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

Lab Number: L1321434
Report Date: 10/28/13

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. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for 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 ADEx 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: L1321434
Report Date: 10/28/13

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.

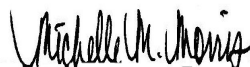
Cyanide, Physiologically Available

L1321434-01 and -02 were analyzed with the method required holding time exceeded.

The WG647441-5 MS recovery (54%), performed on L1321434-02, is below the acceptance criteria; however, the associated LCS recovery was within criteria. No further action was taken.

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:



Michelle M. Morris

Title: Technical Director/Representative

Date: 10/28/13

INORGANICS & MISCELLANEOUS

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

Lab Number: L1321434
Report Date: 10/28/13

SAMPLE RESULTS

Lab ID: L1321434-01
Client ID: MW-S2-100813
Sample Location: MANHATTAN, NY
Matrix: Water

Date Collected: 10/08/13 12:45
Date Received: 10/08/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Physiologically Available	0.321		mg/l	0.005	0.00005	1	10/28/13 09:25	10/28/13 11:59	64,9014(M)	JO



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

Lab Number: L1321434
Report Date: 10/28/13

SAMPLE RESULTS

Lab ID: L1321434-02
Client ID: MW-N2-100813
Sample Location: MANHATTAN, NY
Matrix: Water

Date Collected: 10/08/13 14:20
Date Received: 10/08/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Physiologically Available	0.266		mg/l	0.005	0.00005	1	10/28/13 09:25	10/28/13 12:00	64,9014(M)	JO



Project Name: RIVER PLACE I+II

Lab Number: L1321434

Project Number: 170040901

Report Date: 10/28/13

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: WG647441-1									
Cyanide, Physiologically Available	ND	mg/l	0.005	0.00005	1	10/28/13 09:25	10/28/13 11:56	64,9014(M)	JO

Lab Control Sample Analysis Batch Quality Control

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

Lab Number: L1321434
Report Date: 10/28/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG647441-2								
Cyanide, Physiologically Available	99		-		80-120	-		
General Chemistry - Westborough Lab NEGATIVE LCS Associated sample(s): 01-02 Batch: WG647441-3								
Cyanide, Physiologically Available	2		-		0-10	-		

Matrix Spike Analysis
Batch Quality Control

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

Lab Number: L1321434
Report Date: 10/28/13

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: WG647441-5 QC Sample: L1321434-02 Client ID: MW-N2-100813												
Cyanide, Physiologically Available	0.266	0.2	0.375	54	Q	-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: RIVER PLACE I+II

Project Number: 170040901

Lab Number: L1321434

Report Date: 10/28/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG647441-4 QC Sample: L1321434-01 Client ID: MW-S2-100813						
Cyanide, Physiologically Available	0.321	0.378	mg/l	16		20

Project Name: RIVER PLACE I+II**Lab Number:** L1321434**Project Number:** 170040901**Report Date:** 10/28/13**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(*)
L1321434-01A	Plastic 250ml NaOH preserved	A	>12	3.8	Y	Absent	PACN(14)
L1321434-02A	Plastic 250ml NaOH preserved	A	>12	3.8	Y	Absent	PACN(14)

*Values in parentheses indicate holding time in days

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

Lab Number: L1321434
Report Date: 10/28/13

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

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.
- 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.
- 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.

Report Format: DU Report with "J" Qualifiers



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

Lab Number: L1321434
Report Date: 10/28/13

Data Qualifiers

- 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 exceedences 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: L1321434
Report Date: 10/28/13

REFERENCES

- 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

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

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.



Certificate/Approval Program Summary

Last revised October 1, 2013 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Selenium, Silver, Sodium, Thallium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Coliart (SM9223, Enumeration and P/A), E. Coli. – Coliart (SM9223, Enumeration and P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform-EC Medium (SM 9221E).

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), E. Coli – Coliart (SM9223 Enumeration), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterococcus - Enterolert.

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Dalapon, Volatile Organics (SW 8260), Acid Extractables (Phenols) (SW 8270), Benzidines (SW 8270), Phthalates (SW 8270), Nitrosamines (SW 8270), Nitroaromatics & Cyclic Ketones (SW 8270), PAHs (SW 8270), Haloethers (SW 8270), Chlorinated Hydrocarbons (SW 8270).)

State of Illinois Certificate/Lab ID: 003155. **NELAP Accredited.**

Drinking Water (Inorganic Parameters: SM2120B, 2320B, 2510B, 2540C, SM4500CN-CE, 4500F-C, 4500H-B, 4500NO3-F, 5310C, EPA 200.7, 200.8, 245.1, 300.0. Organic Parameters: EPA 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: SM2120B, 2310B, 2320B, 2340B, 2510B, 2540B, 2540C, 2540D, SM4500CL-E, 4500CN-E, 4500F-C, 4500H-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500P-E, 4500S-D, 4500SO3-B, 5210B, 5220D, 5310C, 5540C, EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1. Organic Parameters: EPA 608, 624, 625.)

Hazardous and Solid Waste (Inorganic Parameters: EPA 1010A, 1030, 1311, 1312, 6010C, 6020A, 7196A, 7470A, 7471B, 9012B, 9014, 9038, 9040C, 9045D, 9050A, 9065, 9251. Organic Parameters: 8011 (NPW only), 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8315A, 8330.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2120B, 2130B, 2320B, 2510C, 2540C, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, 5310C, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 8315A, 9010C, SM2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-C, 4500NH3-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500P-B, 4500P-E, 4500S2-D, 4500SO3-B, 5540C, 5210B, 5220D, 5310C, 9010B, 9030B, 9040C, 7470A, 7196A, 2340B, EPA 200.7, 6010C, 200.8, 6020A, 245.1, 1311, 1312, 3005A, Enterolert, 9223B, 9222D. Organic Parameters: 608, 624, 625, 8011, 8081B, 8082A, 8330, 8151A, 8260C, 8270D, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014, 9040B, 9045C, 6010C, 6020A, 7471B, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B, 9038, 9251. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260C, 8270D, 8330, 8151A, 8081B, 8082A, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5035.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

Non-Potable Water (Inorganic Parameters: (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: 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-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, SW-846 6010C, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9010C, 9030, 9040B, 9040C, SM2120B, 2310B, 2320B, 2340B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 4500SO3-B, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D, 3060A. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082A, 8081B, 8015C, 8151A, 8330, 8270D-SIM.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010C, 6020A, 7196A, 7471B, 1010, 1010A, 1030, 9010C, 9012B, 9014, 9030B, 9040C, 9045C, 9045D, 9050, 9065, 9251, 1311, 1312, 3005A, 3050B, 3060A. Organic Parameters: SW-846 3540C, 3546, 3050B, 3580A, 3620D, 3630C, 5030B, 5035, 8260C, 8270D, 8270D-SIM, 8330, 8151A, 8015B, 8015C, 8082A, 8081B.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2064. NELAP Accredited.

Drinking Water (Organic Parameters: **EPA 524.2**: Di-isopropyl ether (DIPE), Ethyl-t-butyl ether (ETBE), Tert-amyl methyl ether (TAME)).

Non-Potable Water (Organic Parameters: **EPA 8260C**: 1,3,5-Trichlorobenzene. **EPA 8015C(M)**: TPH.)

Solid & Chemical Materials (Organic Parameters: **EPA 8260C**: 1,3,5-Trichlorobenzene.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.1, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310C, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, 4500SO4-E, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, SW-846 9040B, 9040C, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010C, 9030B. Organic Parameters: SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 5030C, 8011, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ EPH.)

Page 17 of 20 *Solid & Chemical Materials* (Inorganic Parameters: SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9030B, 1010, 1010A, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9010C, 9012B, 9014, 9038, 9040B, 9040C, 9045C, 9045D,

9050A, 9065, 9251. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5030C, 5035L, 5035H, NJ EPH.)

New York Department of Health Certificate/Lab ID: 11148. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.1, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO₃-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH₃-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO₃-F, 4500-NO₂-B, 4500P-E, 2340B, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010C, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 7470A, SM2120B, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 8315A, 3005A, 9010C, 9030B. Organic Parameters: EPA 624, 8260C, 8270D, 8270D-SIM, 625, 608, 8081B, 8151A, 8330A, 8082A, EPA 3510C, 5030B, 5030C, 8015C, 8011.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, EPA 6010C, 6020A, 7196A, 7471B, 8315A, 9012B, 9014, 9065, 9050A, 9038, 9251, EPA 1311, 1312, 3005A, 3050B, 9010C, 9030B, 9040C, 9045D. Organic Parameters: EPA 8260C, 8270D, 8270D-SIM, 8015C, 8081B, 8151A, 8330A, 8082A, 3540C, 3546, 3580A, 5035A-H, 5035A-L.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. (Inorganic Parameters: SM2310B, 2320B, 4500Cl-E, 4500Cn-E, 9012B, 9014, Lachat 10-204-00-1-X, 1010A, 1030, 4500NO₃-F, 353.2, 4500P-E, 4500SO₄-E, 300.0, 4500S-D, 5310B, 5310C, 6010C, 6020A, 200.7, 200.8, 3500Cr-B, 7196A, 245.1, 7470A, 7471B, 1311,1312. Organic Parameters: 608, 8081B, 8082A, 624, 8260B, 625, 8270D, 8151A, 8015C, 504.1, MA-EPH, MA-VPH.)

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: 200.7, 200.8, 300.0, 332.0, 2120B, 2320B, 2510B, 2540C, 4500-CN-CE, 4500F-C, 4500H+-B, 4500NO₃-F, 5310C. Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1312, 3005A,3015, 3060A, 200.7, 200.8, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P,BE, 245.1, 300.0, 350.1, 350.2, 351.1, 353.2, 420.1, 6010C, 6020A, 7196A, 7470A, 9030B, 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500CN-CE, 4500Cl-E, 4500F-B, 4500F-C, 4500H+-B, 4500NH₃-H, 4500NO₂-B, 4500NO₃-F, 4500S-D, 4500SO₃-B, 5310BCD, 5540C, 9010C, 9040C. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, 8015C, NJ-EPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3005A, 3050B, 3060A, 6010C, 6020A, 7196A, 7471B, 9010C, 9012B, 9014, 9040B, 9045D, 9050A, 9065, SM 4500NH₃-BH, 9030B, 9038, 9251. Organic Parameters: 3540C, 3546, 3580A, 3620C, 3630C, 5035, 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, NJ-EPH.)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. *NELAP Accredited via NJ-DEP.*

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commisison on Environmental Quality Certificate/Lab ID: T104704476. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH₃-H, 4500NO₂B, 4500P-E, 4500 S²⁻ D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460195. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: EPA 200.7, 200.8, 300.0, 2510B, 2120B, 2540C, 4500CN-CE, 245.1, 2320B, 4500F-C, 4500NO₃-F, 4500H+B, 5310C. Organic Parameters: EPA 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 350.1, 351.1, 351.2, 3005A, 3015, 1312, 6010B, 6010C, 3060A, 353.2, 420.1, 2340B, 6020, 6020A, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X, 7196A, 7470A, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 3500Cr-D, 426C, 4500Cl-E, 4500F-B, 4500F-C,

4500NH3-H, 4500NO2-B, 4500NO3-F, 4500 SO3-B, 4500H-B, 4500PE, 510AC, 5210B, 5310B 5310C, 5540C, 9010Cm 9030B, 9040C. Organic Parameters: EPA 3510C, 3630C, 5030B, 8260B, 608, 624, 625, 8011, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330,)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, 3060A, 3050B, 1311, 1312, 6010B, 6010C, 6020, , 7196A, 7471A, 7471B, 6020A, 9010C, 9012B, 9030B, 9014, 9038, 9040C, 9045D, 9251, 9050A, 9065. Organic Parameters: EPA 5030B, 5035, 3540C, 3546, 3550B, 3580A, 3620C, 3630C, 6020A, 8260B, 8260C, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330.)

Department of Defense, L-A-B Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010C, 6020A, 245.1, 7470A, 9040B, 9010B, 180.1, 300.0, 332.0, 6860, 351.1, 353.2, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500Norg-C, 4500NO3-F, 5310C, 2130B, 2320B, 2340B, 2540C, 5540C, 3005A, 3015, 9056, 7196A, 3500-Cr-D. Organic Parameters: EPA 8015C, 8151A, 8260C, 8270D, 8270D-SIM, 8330A, 8082A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010C, 6020A, 7471A, 6860, 1311, 1312, 3050B, 7196A, 9040B, 9045C, 9010C, 9012B, 9251, SM3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8015C, 8151A, 8260C, 8270D, 8270D-SIM, 8330A/B-prep, 8082A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

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

EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether. **EPA 8260B:** 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8260 Non-potable water matrix:** Iodomethane (methyl iodide), Methyl methacrylate. **EPA 8260 Soil matrix:** Tert-amyl methyl ether (TAME), Diisopropyl ether (DIPE), Azobenzene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine. **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, TKN in a soil matrix, NO2 in a soil matrix, NO3 in a soil matrix. **EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.



CHAIN OF CUSTODY

PAGE 1 OF 1

WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd In Lab: 10/8/13

ALPHA Job #: L1321434
~~L1320135~~ 10124113

Project Information

Project Name: River Place 1+11

Project Location: Manhattan, NY

Project #: 170040901

Project Manager: Jason Hayes

ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due: 10/15/13 Time: 10/28/13

Report Information - Data Deliverables

FAX EMAIL
 ADEX Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: NYSDEC Criteria:

Client Information

Client: Langan Engineering

Address: 360 W. 31st Street

New York, NY 10001

Phone: 212.479.5400

Fax: 212.479.5444

Email: N.Rochna@Langan.com

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS	SAMPLE HANDLING					TOTAL # BOTTLES
	Filtration	Done	Not needed	Lab to do	Preservation	
<u>TOCS</u> <u>SVOCs</u> <u>Metals</u> <u>Hexachlor</u> <u>PCPN</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ALPHA Job ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS					Sample Specific Comments
		Date	Time			TOCS	SVOCs	Metals	Hexachlor	PCPN	
<u>L1321434</u>	<u>MW-S2-100813</u>	<u>10/08/13</u>	<u>12:45</u>	<u>GLW</u>	<u>BH</u>	X	X	X	X	X	
<u>L1321434</u>	<u>MW-N2-100813</u>	<u>10/08/13</u>	<u>14:20</u>	<u>GW</u>	<u>BLA</u>	X	X	X	X	X	
<u>L1321434</u>	<u>TB01-100813</u>	<u>10/08/13</u>	<u>1440</u>	<u>w</u>	<u>BH</u>	X					

Container Type	Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
<u>Bette Howard</u>	<u>10/08/13 15:20</u>	<u>[Signature]</u>	<u>10-8-13 15:30</u>
<u>[Signature]</u>	<u>10-8-13 17:25</u>	<u>[Signature]</u>	<u>10/8/13 17:25</u>
<u>[Signature]</u>	<u>10/8/13 2:30</u>	<u>Richard [Signature]</u>	<u>10/8/13 2:30</u>

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.