September 6, 2018

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

RE: Site Management Plan Annual Review – August 2018
West 42nd Street – River Place II
West 41st – West 42nd Streets
New York, New York 110036
NYSDEC BCP Site No. C231012
Langan Project No.: 170040901

Dear Mr. MacNeal:

This letter documents ongoing compliance with the July 2006 Site Management Plan (SMP) that was prepared in accordance with the New York State Brownfield Cleanup Program (BCP) for the River Place II property (the Site). The Site is located between West 41st and West 42nd Streets and 11th and 12th Avenues on the west side of Manhattan, New York. The last review letter was submitted to you and accepted in September 2017.

The following is an update on the status of the requirements of the SMP for the Site including: 1) institutional control/engineering controls (IC/EC), and 2) groundwater monitoring. The last round of indoor air sampling was conducted on December 22, 2011. According to correspondence between Mr. MacNeal of the New York State Department of Environmental Conservation (NYSDEC) and Langan dated August 31, 2011, indoor air sampling was discontinued after the December 2011 sampling event.

Langan prepared a Corrective Measures Work Plan (CMWP) dated December 5, 2014 to address water intrusion observed in the boiler room and oil tank room in the sub-cellar of the site building during Langan's annual site-wide SMP inspection on August 12, 2014. In accordance with the CMWP, CANY Technical Services, LLC (CANY) performed an assessment of the water intrusion condition and prepared survey plans dated April 30, 2015. As part of the annual site-wide SMP inspection, Langan performed a site walk on August 6, 2015 and documented the location and water intrusion conditions. CANY retained CGI Northeast (CGI) to complete corrective measures to address the water intrusion during the weeks of October 19 and 26, 2015. Langan performed a confirmatory site walk on December 2, 2015. No active water intrusion was observed. A summary of observations and corrective measures performed is provided in the January 29, 2016 Corrective Measures Implementation memorandum.

Institutional Control/Engineering Controls (IC/EC) Inspection

Institutional and engineering controls at the Site include a cover system, a vapor/water barrier and an environmental easement as described below. The signed and completed NYSDEC IC/EC Certification Form is provided as Attachment A.

Cover System – The site cover system includes the building foundation slabs, asphalt parking lots, concrete walkways, and top soil used in landscaped areas. The construction of the cover system is complete. Both building slabs and the park portion between the buildings were inspected by Langan on August 15, 2018 and were observed to be intact. Photographs of site cover are provided as Attachment B.

Inspection of Vapor/Water Barrier – Langan inspected the vapor/water barrier at River Place II on August 15, 2018. Groundwater intrusion was observed in several locations within the electrical services room and aboveground storage tank room. Staining was observed in the areas of intrusion within the electrical services room. Corrective measures, including concrete gel injection and patching with hydraulic cement, will be completed in accordance with the December 5, 2014 CMWP to prevent further infiltration of groundwater into the building. Implementation of the corrective measures is anticipated for 4th Quarter 2018. A visual inspection will be conducted after the completion of the repair and again in six months.

Environmental Easement – Groundwater is not used for any purpose. Land use remains as multiple-story residential.

Quarterly Groundwater Monitoring

Quarterly groundwater monitoring was required for the first two years following completion of the remedial construction, as specified in the SMP. On February 28 and March 7, 2009, two groundwater monitoring wells were installed in the park area between RP I and RP II. Langan performed the seventh annual monitoring event on October 9, 2017. The seventh annual groundwater monitoring report is included as Attachment C. The next annual groundwater monitoring event is anticipated to occur in October 2018.

Annual Indoor Air Monitoring

The SMP required annual indoor air sampling in River Place I for three years. The final round of indoor air sampling was conducted by GCI Environmental Advisory, Inc. on December 22, 2011. The Ambient/Indoor Air Monitoring Assessment Survey report was provided as Attachment E in the June 2011 SMP Annual Review document.

Recommendations

In accordance with the December 5, 2014 CMWP, we recommend that the groundwater intrusion condition should be remediated to prevent further intrusion into the site. Corrective measures are anticipated for 4th Quarter 2018. A visual inspection should be conducted of the sub cellar areas after the completion of the repair. The repairs should be visually inspected again, six months after the repair, and annual inspections of the site cover system should continue. We also recommend indoor air sampling within the affected areas of the cellar and within areas located directly above the cellar, following completion of the repair.

Closing

The SMP is being implemented in accordance with the schedules discussed above. Should you have any questions, please contact me at 212-479-5582.

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

Ryan Manderbach, CHMM
Associate

Enclosures:

Attachment A	NYSDEC Institutional and Engineering Controls Certification Form
Attachment B	Site Cover Photographs
Attachment C	Annual Groundwater Monitoring Report - 2017

Cc: William R. Dacunto – River Place 2 LLC
Richard Rienzo - Con Edison

Attachment A

NYSDEC Institutional and Engineering Controls Certification Forms

Enclosure 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. **C231012**

Site Name CE - W 42nd St. - River Place II

Site Address: West 41st - West 42nd Sts. Zip Code: 10036
City/Town: New York
County: New York
Site Acreage: 1.1

Reporting Period: August 16, 2017 to August 16, 2018

	YES	NO
1. Is the information above correct?	☑	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☑
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☑
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☑
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☑

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial	☑	☐
7. Are all ICs/ECs in place and functioning as designed?	☐	☑

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative — Date: 9/17/2018

Box 2A

	YES	NO
8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	☐

If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.

9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	☐	☐

If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.

SITE NO. C231012 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
10890003	River Place 2 LLC/C	Site Management Plan Ground Water Use Restriction Soil Management Plan Landuse Restriction

Annual reports on quarterly groundwater monitoring and annual indoor air monitoring events were required, b is now discontinued. An annual certification, that the ground cover is intact as well as the continued effectiveness of the newly-installed vapor barrier and that the groundwater restrictions are still in force, is still required.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
10890003	Vapor Mitigation Cover System Subsurface Barriers

A subsurface vapor barrier as well as a ground cover act to prevent people from being exposed to the contaminated soils and soil vapor.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☐	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☐	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. C231012

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I William R. Dacunto (print name) at 7 World Trade Center, 250 Greenwich St. (print business address)

am certifying as Remedial Party (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

9/7/18
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as a Professional Engineer for the _____
(Owner or Remedial Party)

_____	_____	_____
Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification	Stamp (Required for PE)	Date

Attachment B

Site Cover Photographs

Photo 1: Water intrusion through conduit in the Site electrical services room.

Photo 2: Water intrusion and sump pump in the Site electrical services room

Photo 3: Water intrusion in the Site electrical services room.

Photo 4: Surface cover in the Site boiler room.

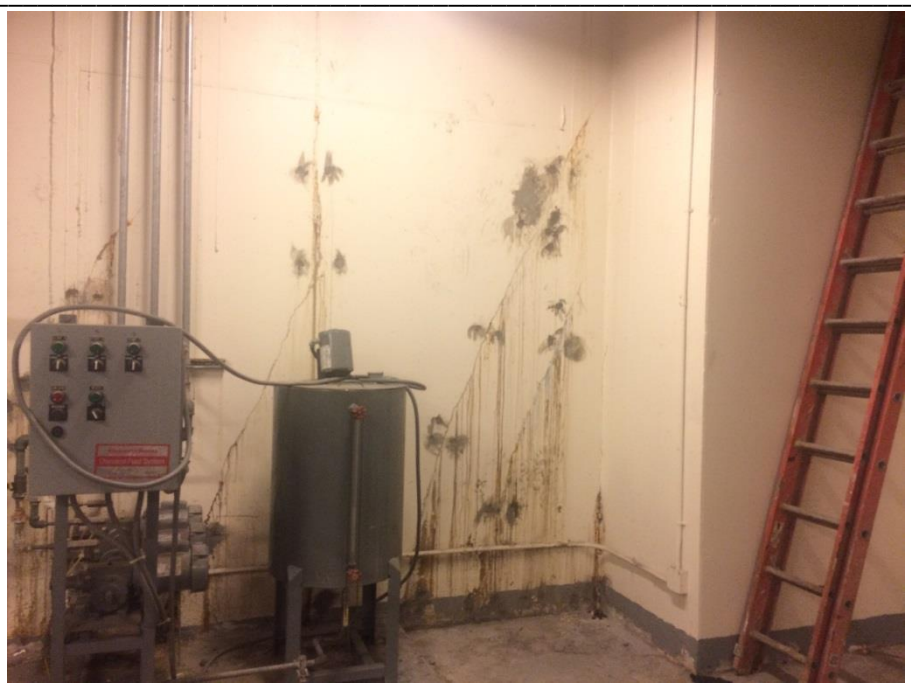


Photo 5: Grout injections on the wall of the sub-cellar level.

Photo 6: Previously repaired wall of the Site sub-cellar level boiler room.

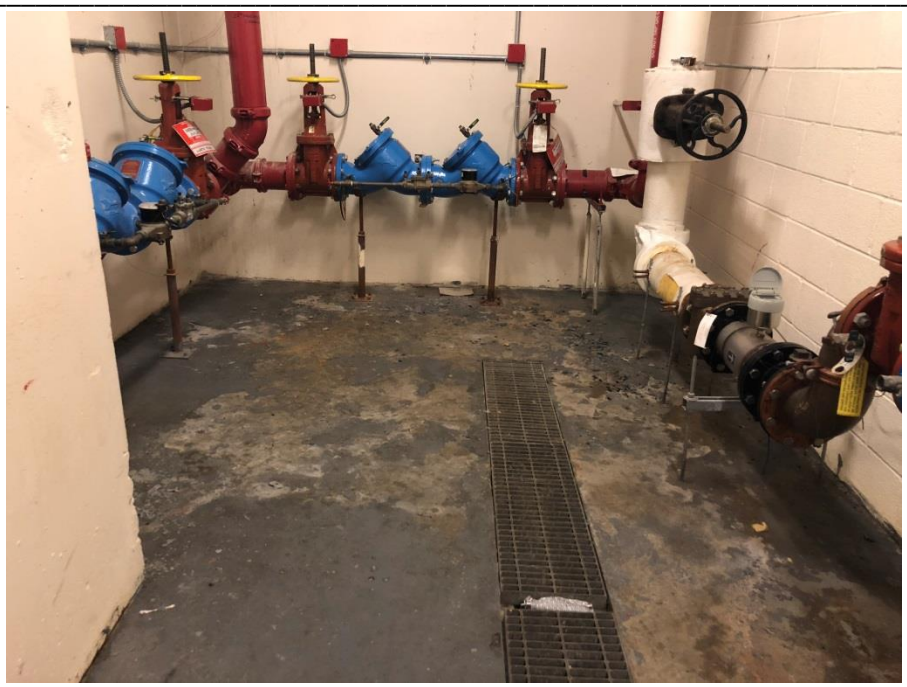


Photo 7: Surface cover in the Site fire pump room.

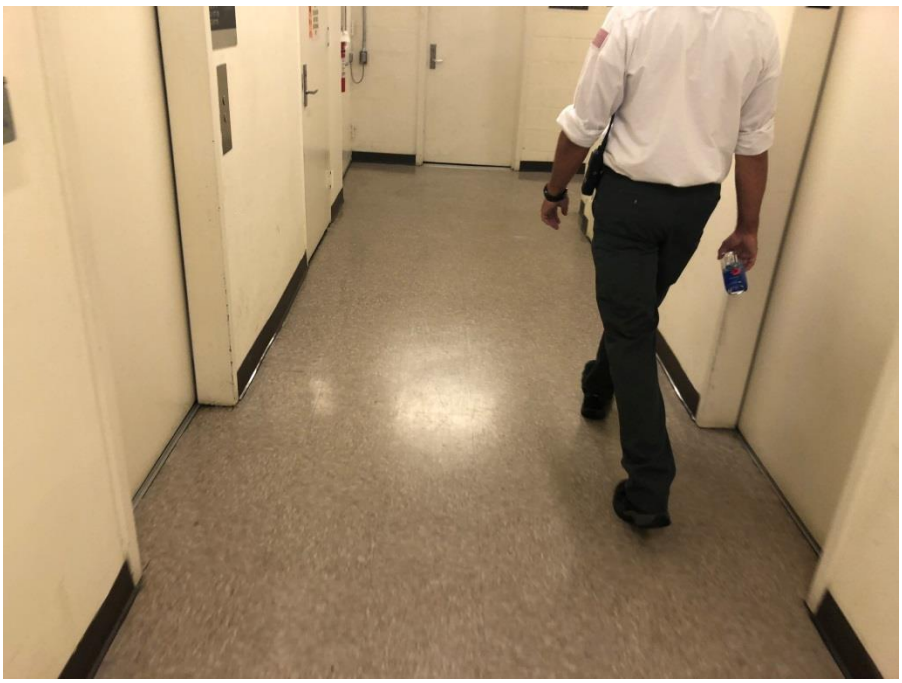


Photo 8: Typical ground cover in the Site hallway.

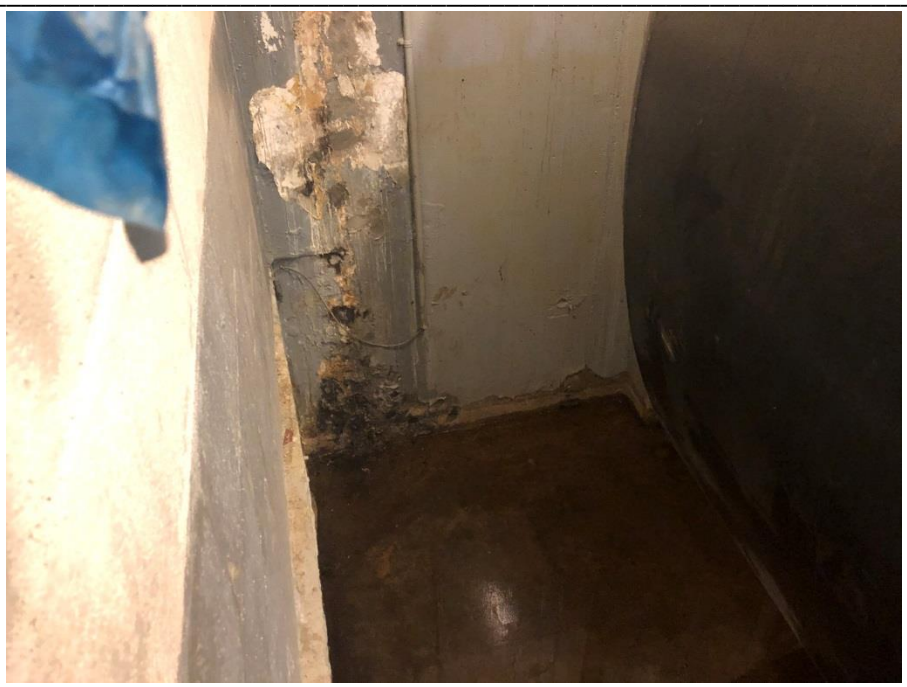


Photo 9: Grout injections and surface cover in Site AST room.

Photo 10: Water intrusion through the surface cover of the Site AST room.

Photo 11: Surface cover in Site laundry room.

Photo 12: Surface cover and wall grout injections in Site boiler room.

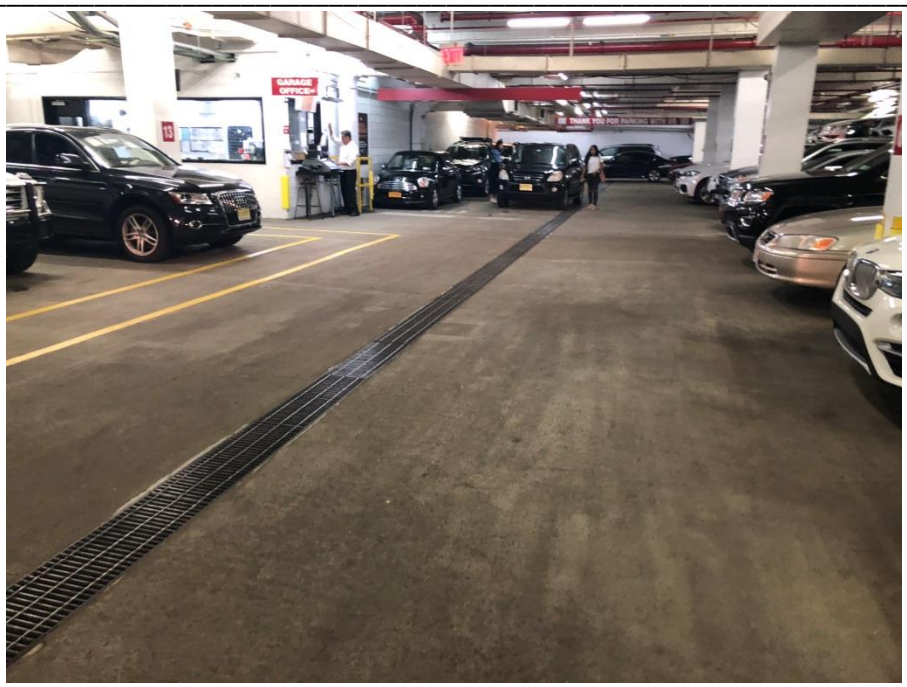


Photo 13: Surface cover in Site garage.

Photo 14: Surface cover in Site fire pump room.

Photo 15: Surface cover in Site mechanical room.

Photo 16: River Place – facing south.

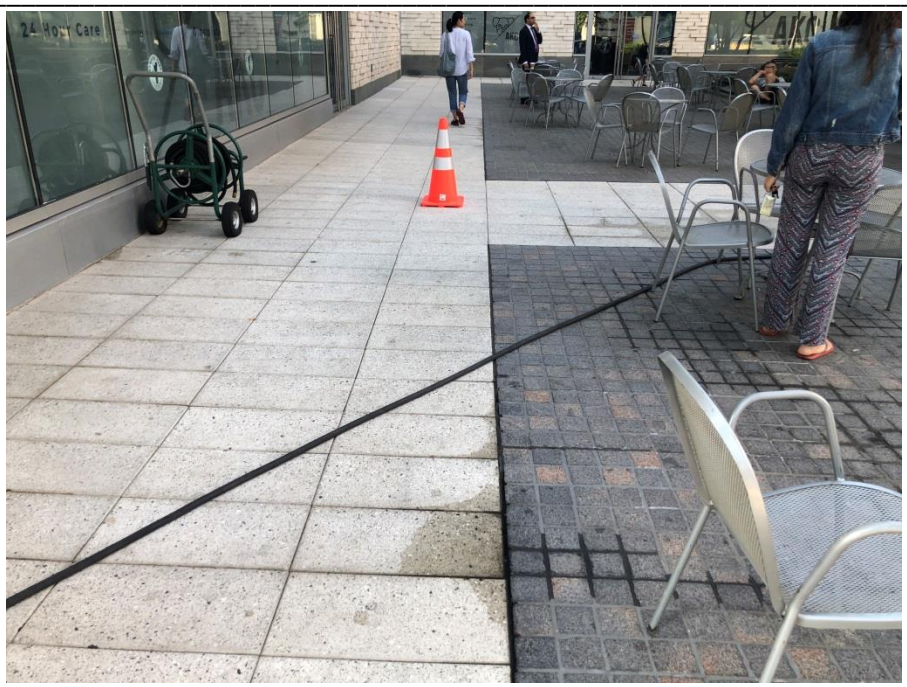


Photo 17: Exterior area of the Site covered with pavers, facing south.

Attachment C

Annual Groundwater Monitoring Report - 2017

December 7, 2017

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 – 2017
River Place I & II
West 42nd Street, New York, New York
BCP Site Nos. C231024 and C231012
Langan Project No.: 170040901

Dear Mr. MacNeal:

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

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 seventh annual sampling event conducted in October 2017.

2017 Annual Groundwater Sampling

On October 9, 2017, Langan sampled groundwater monitoring wells MW-N2 and MW-S2. A Well Location Map is attached as Figure 2. Langan visually inspected the monitoring wells for evidence of tampering or damage and measured the depth to groundwater using a Solinst oil/water interface probe. Water level measurements were repeated at least once to verify the accuracy of the initial measurement. All measurements were recorded on Langan field sampling forms. Copies of the completed field forms are included as Attachment A of this report.

Prior to collecting groundwater samples, MW-N2 and MW-S2 were purged using low-flow purge and sample techniques. The wells were purged using clean, dedicated, polyethylene

tubing attached to a Waterra positive displacement pump. During purging, groundwater quality parameters (dissolved oxygen, pH, oxidation reduction potential, temperature, turbidity, and specific conductance) were monitored and recorded. MW-N2 and MW-S2 were purged until physical and chemical parameters stabilized. About 1.80 and 1.75 gallons were purged from monitoring wells MW-N2 and MW-S2, respectively. After purging, the wells were allowed to recover to approximately 90 percent or more of the static water level and samples MW-N2_100917 and MW-S2_100917 were collected using a Waterra pump and dedicated tubing.

Groundwater samples MW-N2_100917 and MW-S2_100917 were collected into laboratory-prepared containers, tightly sealed, uniquely labeled, and then stored on ice for transport to Alpha Analytical (Alpha) in Westborough, Massachusetts, under standard chain-of-custody procedures. The groundwater samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260, semivolatile organic compounds (SVOCs) by EPA Method 8270, Target Analyte List (TAL) metals by EPA SW 6000/7000, cyanide (total) by EPA SW 9012, and cyanide (available) by EPA 9014. Groundwater sampling logs are provided in Attachment A.

Findings

Observations

- Measurable free product was not observed in either well
- A yellowish tint was observed in purge water from MW-N2
- Turbidity in MW-S2 did not stabilize prior to sampling
- Odor was noted in both monitoring wells
- The wells were observed to be in good condition

Groundwater Analytical Results

Analytical results for the 2017 annual monitoring event that exceeded the NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) Class GA are summarized below.

MW-N2	
VOCs	
• 1,2,4-trimethylbenzene	• naphthalene
• 1,3,5-trimethylbenzene	• p/m-xylene
• benzene	• o-xylene
• ethylbenzene	• toluene
SVOCs	
• 2,4-dimethylphenol	• biphenyl
• acenaphthene	• chrysene
• benzo(a)anthracene	• indeno(1,2,3-cd)pyrene
• benzo(a)pyrene	• naphthalene
• benzo(b)fluoranthene	• phenol
• benzo(k)fluoranthene	
Inorganics	
• cyanide	• manganese
• iron	• sodium
• magnesium	

MW-S2	
VOCs	
• benzene	• o-xylene
• ethylbenzene	
• isopropylbenzene	
• naphthalene	
SVOCs	
• benzo(a)anthracene	• chrysene
• benzo(a)pyrene	• indeno(1,2,3-cd)pyrene
• benzo(b)fluoranthene	
• benzo(k)fluoranthene	
Inorganics	
• cyanide	• manganese
• iron	• sodium
• magnesium	

Concentrations of all contaminants of concern (VOCs, SVOCs, and cyanide) have decreased in monitoring wells MW-N2 and MW-S2 since the annual 2016 sampling event, with the exception of benzo(a)anthracene, chrysene, and naphthalene in MW-S2. Analytical results for the First Quarter 2009 through Seventh Annual 2017 sampling rounds are summarized in Table 1 and the laboratory analytical report for the 2017 annual sampling results is included as Attachment B.

Please contact us if you have any questions.

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

Ryan Manderbach, CHMM
Associate

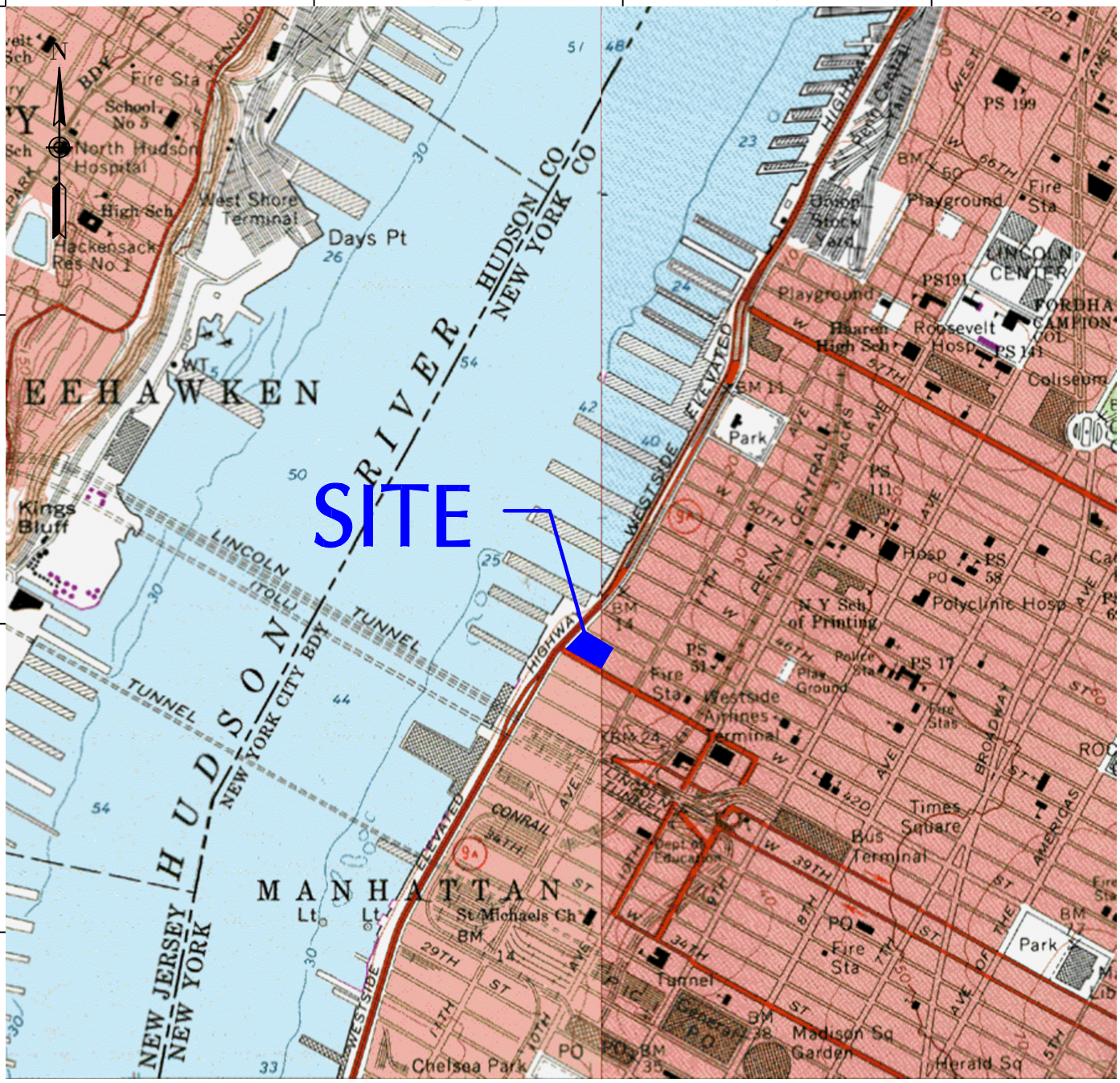
Enclosure(s):

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

cc:

Richard Rienzo- Con Edison
William R. Dacunto- River Place II LLC
Nicole Rice, Kimberly Del Col – 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.

LANGAN

21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
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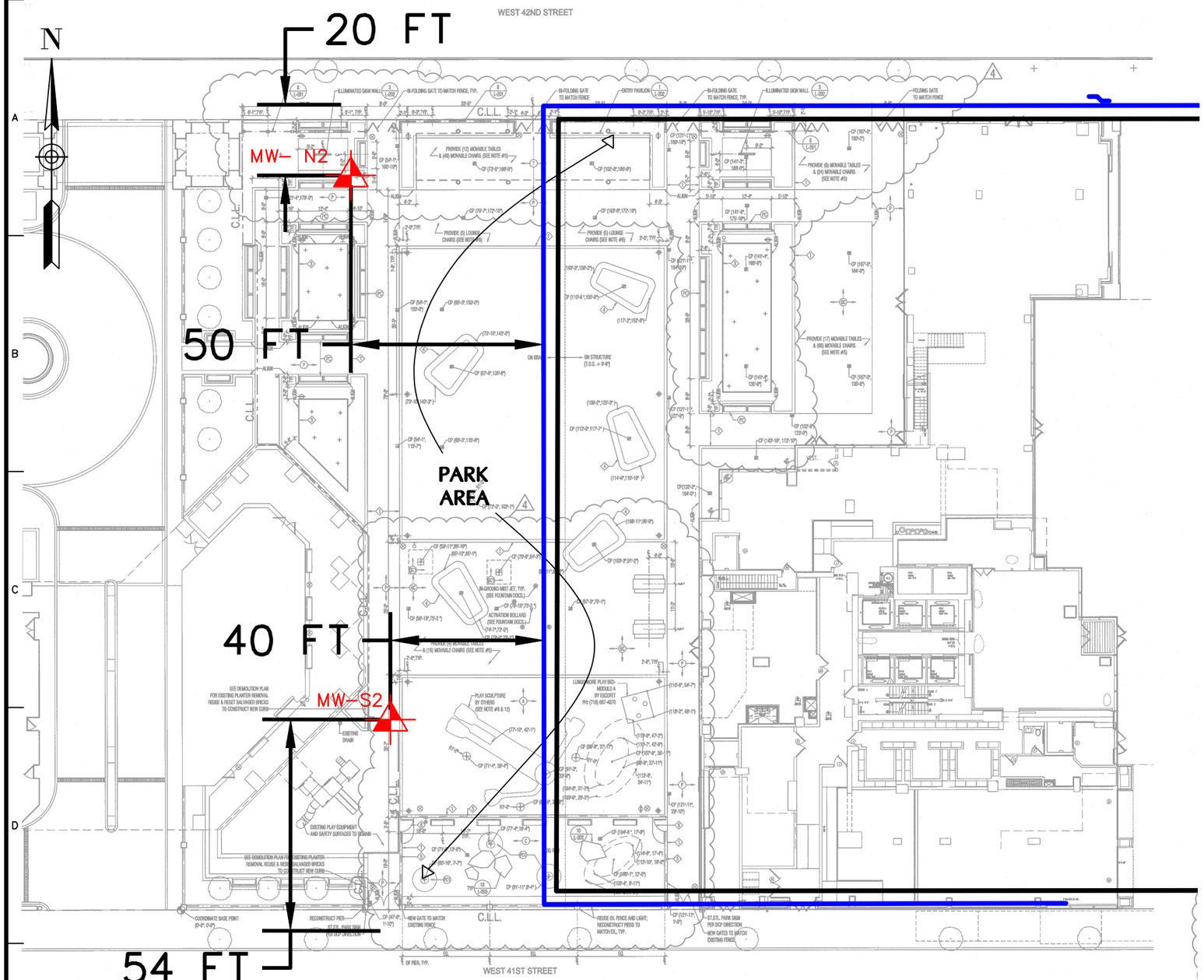
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project	RIVER PLACE I & II 650 WEST 42ND STREET NEW YORK NEW YORK
Figure Title	SITE LOCATION MAP
Project No.	170040901
Date	10/17/2017
Scale	NTS
Drawn By / Checked By	KDC / NR
Submission Date	
Figure	1
Sheet	1 of 2

Filename: \\Langan.com\data\NY\data9\170040901\Cadd Data - 170040901\Dwg\site location map.dwg Date: 11/15/2017 Time: 14:09 User: nrice Style Table: Langan.stb Layout: ANSIA-BP



NOTES:

1. BASEMAP TAKEN FROM MANHATTAN SURVEYING ARCHITECTURAL SURVEY DATED JUNE 3, 2006 AND PARK LAYOUT AND MATERIALS PLAN BY COSTAS KONDYLIS AND PARTNERS LLP ARCHITECTS DATED OCTOBER 1, 2008.

2. MONITORING WELLS WERE RE-ISNTALLED ON DECEMBER 28, 2009. LOCATIONS ARE APPROXIMATE.

LEGEND:

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

SHEET PILE WALL

PROPERTY BOUNDARY (RIVER PLACE II)

LANGAN
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New York, NY 10001
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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
NJ Certificate of Authorization No. 24GA27996400

Project
RIVER PLACE I & II
650 WEST 42ND STREET
NEW YORK NEW YORK

Figure Title
MONITORING WELL LOCATION MAP

Project No. 170040901	Figure 2
Date 10/18/2017	
Scale NTS	
Drawn By KDC / Checked By NR	
Submission Date ---	Sheet 2 of 2

Filename: \\Langan.com\data\NY\data9\170040901\Cadd Data - 170040901\Dwg\Monitoring well locations-reinstall.dwg Date: 11/15/2017 Time: 14:38 User: nrice Style Table: Langan.stb Layout: ANSIB-BL

TABLES

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

		Park Area Northern Well																											
		2009								2010						2011		2012		2013		2014		2015		2016		2017	
		1st Quarter		1st Quarter		2nd Quarter		3rd Quarter		4th Quarter[2]		1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		YEAR 6		YEAR 7	
LOCATION	**NYSDEC TOGS**	**MW-N-3-16-09**		**DUP-3-16-09**		**MW-N-6-17-09**		**MW-N-9/18/09**		**MW-N2-1-7-2010**		**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**		**MW-N2_101414**		**MW-N2_101615**		**MW-N2_101416**		**MW-N2 100917**	
SAMPLING DATE	**1.1.1 AWQS**	**3/16/2009**		**3/16/2009**		**6/17/2009**		**9/18/2009**		**1/7/2010**		**3/1/2010**		**6/10/2010**		**9/8/2010**		**12/15/2010**		**10/17/2011**		**10/17/2012**		**10/8/2013**		**10/14/2014**		**10/16/2015**		**10/16/2016**		**10/9/2017**	
LAB SAMPLE ID		**L0903143-01**		**L0903143-03**		**L0908040-01**		**L0913185-01**		**L1000282-01**		**L1003006-01**		**L1008735-02**		**L1013903-01**		**L1020042-01**		**L1116955-02**		**L1218727-02**		**L1320135-02**		**L1424443-01**		**L1526418-02**		**L1633122-02**		**L1736330-01**	
VOCs (µg/L)																															
1,2,4-Trimethylbenzene	5	*1200*	U	*1200*	U	*1200*	U	*1200*	U	*1200*	U	*250*	U	*500*	U	*620*	U	*620*	U	**270**	J	**240**	J	**80**	J	**130**	J	**89**	J	**140**	J	**82**	
1,3,5-Trimethylbenzene	5	*1200*	U	*1200*	U	*1200*	U	*1200*	U	*1200*	U	*250*	U	*500*	U	*620*	U	*620*	U	**96**	J	*620*	U	*250*	U	*250*	U	*250*	U	*250*	U	**25**	J
Benzene	1	**19000**		**19000**		**17000**		**15000**		**2900**		**610**		**1100**		**2100**		**2400**		**2400**		**1600**		**1100**		**1400**		**1200**		**1300**		**880**	
Bromomethane	5	*500*	U	*500*	U	*500*	U	*500*	U	*500*	U	*100*	U	*200*	U	*250*	U	*250*	U	*200*	U	*620*	U	*250*	U	*250*	U	*250*	U	**170**	J	*62*	U
Ethylbenzene	5	**1900**		**1900**		**1900**		**1800**		**1400**		**170**		**410**		**810**		**980**		**810**		**580**	J	**250**		**300**		**240**	J	**340**		**190**	
Isopropylbenzene	5	*250*	U	*250*	U	*250*	U	*250*	U	*250*	U	*50*	U	*100*	U	*120*	U	*120*	U	*100*	U	*620*	U	*250*	U	*250*	U	*250*	U	*250*	U	*62*	U
Methylene chloride	5	*2500*	U	*2500*	U	*2500*	U	*2500*	U	*2500*	U	*500*	U	*1000*	U	*1200*	U	*1200*	U	*1000*	U	*620*	U	*250*	U	*250*	U	*250*	U	*250*	U	*62*	U
Naphthalene	10	**15000**		**15000**		**18000**		**19000**		**22000**		**4200**		**5400**		**12000**		**15000**		**10000**		**9200**		**3600**		**3900**		**4900**		**5000**		**3900**	
n-Butylbenzene	5	*250*	U	*250*	U	*250*	U	*250*	U	*250*	U	*50*	U	*100*	U	*120*	U	*120*	U	*100*	U	*620*	U	*250*	U	*250*	U	*250*	U	*250*	U	*62*	U
n-Propylbenzene	5	*250*	U	*250*	U	*250*	U	*250*	U	*250*	U	*50*	U	*100*	U	*120*	U	*120*	U	*100*	U	*620*	U	*250*	U	*250*	U	*250*	U	*250*	U	*62*	U
o-Xylene	5	**1400**		**1300**		**1400**		**1200**		**1000**		**180**		**330**		**590**		**760**		**630**		**470**	J	**230**	J	**280**		**230**	J	**300**		**200**	
p/m-Xylene	5	**3200**		**3100**		**3100**		**2900**		**2200**		**330**		**600**		**1100**		**1400**		**1200**		**760**		**280**		**370**		**300**		**370**		**190**	
p-Isopropyltoluene	5	*250*	U	*250*	U	*250*	U	*250*	U	*250*	U	*50*	U	*100*	U	*120*	U	*120*	U	*100*	U	*620*	U	*250*	U	*250*	U	*250*	U	*250*	U	*62*	U
Styrene	5	*500*	U	*500*	U	*500*	U	*500*	U	*500*	U	*100*	U	*200*	U	*250*	U	*250*	U	*200*	U	*620*	U	*250*	U	*250*	U	*250*	U	*250*	U	*62*	U
Toluene	5	**4200**		**4000**		**4400**		**4100**		**740**		*75*	U	*150*	U	**290**		**420**		**410**		**240**	J	**90**	J	**120**	J	**85**	J	**76**	J	**38**	J
SVOCs (µg/L)																															
2,4-Dimethylphenol	50	**1800**		**1800**		**830**		**1200**		**270**		*500*	U	29		**160**		10	U	**230**		**150**		**89**		25		**110**		**180**		**100**	
Acenaphthene	20	**120**		**160**		**95**		**99**		**61**		**65**		**93**		**97**		**170**		**140**		**190**		**96**		**110**		**77**		**93**		**70**	
Benzo(a)anthracene	0.002	**8.8**		*39*	U	*8.2*	U	*9.6*	U	*40*	U	*10*	U	**9.2**		*80*	U	*100*	U	*80*	U	*50*	U	**1.5**		**10**		**4.7**	J	**23**		**4.7**	
Benzo(a)pyrene	0	**7.2**		*39*	U	*8.2*	U	*9.6*	U	*40*	U	*10*	U	**8.9**		*80*	U	*100*	U	*80*	U	*50*	U	**1.2**		**7.8**		*40*	U	**22**		**4.2**	
Benzo(b)fluoranthene	0.002	**8.4**		*39*	U	*8.2*	U	*9.6*	U	*40*	U	*10*	U	**9.2**		*80*	U	*100*	U	*80*	U	*50*	U	**1.2**		**12**		*40*	U	**26**		**4.6**	
Benzo(k)fluoranthene	0.002	*3.9*	U	*39*	U	*8.2*	U	*9.6*	U	*40*	U	*10*	U	*4*	U	*80*	U	*100*	U	*80*	U	*50*	U	**0.8**	J	**4.2**		*40*	U	**7.1**		**1.8**	
Biphenyl	5	**50**		**56**		*26*	U	**36**		**72**		*250*	U	**30**		**34**		**52**		**46**		**47**		**28**		**33**		**20**		**24**		**23**	
Bis(2-Ethylhexyl)phthalate	5	*24*	U	*24*	U	*26*	U	**46**		*25*	U	*250*	U	5	U	5	U	5	U	3	U	3	U	*15*	U	*15*	U	3	U	*15*	U	3.4	
Chrysene	0.002	**4.1**		*39*	U	*8.2*	U	*9.6*	U	*40*	U	*10*	U	**7.2**		*80*	U	*100*	U	*80*	U	*50*	U	**1**		**7.9**		*40*	U	**16**		**3**	
Fluoranthene	50	28		43		10		14		40	U	10	U	34		*80*	U	*100*	U	*80*	U	18	J	7.3		37		12	J	**66**		18	
Fluorene	50	**56**		**80**		**59**		47		40	U	39		**60**		*80*	U	*100*	U	**58**	J	**67**		29		41		30	J	44		33	
Indeno(1,2,3-cd)Pyrene	0.002	*3.9*	U	*39*	U	*8.2*	U	*9.6*	U	*40*	U	*10*	U	*4*	U	*80*	U	*100*	U	*80*	U	*50*	U	**0.64**	J	**6.5**		*40*	U	**10**		**3.1**	
Naphthalene	10	**12000**		**14000**		**8900**		**9400**		**2200**		**2700**		**4200**		**6900**		**9100**		**6800**		**8400**		**2800**		**3000**		**2400**		**3400**		**1800**	
Phenanthrene	50	**100**		**150**		**53**		**62**		40		**52**		**84**		*80*	U	*100*	U	**97**		**90**		33		**75**		48		**97**		47	
Phenol	1	**120**		**110**		**61**		**87**		*35*	U	*350*	U	**17**		**27**		**16**		*5*	U	*5*	U	*25*	U	**15**	J	**3**	J	*25*	U	**3**	J
Pyrene	50	27		8.2	U	10		NT		*200*	U	10	U	25		*80*	U	*100*	U	23	U	*250*	U	5.2		**75**		8.8	J	50		14	
Total Metals																															
Arsenic, Total	25	15		17		15		15		11		6		5		11		14		**128**		7.6		6.78		4.5		2.7		2.5		1.84	
Iron, Total	300	**5300**		**2700**		**1900**		**1200**		**3500**		**4000**		**4800**		**2600**		**12000**		**3300**		**1270**		**1780**		**2870**		**1620**		**2500**		**1750**	
Lead, Total	25	15		10	U	10	U	10	U	10	U	10	U	10	U	10	U	**67**		10	U	2.4	J	1.79		2.3		0.6	J	1.1		0.53	J
Magnesium, Total	35000	**70000**		**72000**		**70000**		**59000**		**83000**		**46000**		**46000**		**51000**		**86000**		**64000**		**42000**		**57700**		**63400**		**59600**		**84700**		**48200**	
Manganese, Total	300	**1570**		**1430**		**1570**		**1340**		**746**		**603**		**632**		**528**		**816**		**582**		**542.8**		**337.5**		**470.6**		**436.5**		**1070**		**415.9**	
Mercury, Total	0.7	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.3		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.07	U	**0.7**	J
Sodium, Total	20000	**300000**		**320000**		**270000**		**250000**		**240000**		**110000**		**160000**		**200000**		**240000**		**210000**		**127000**		**175000**		**172000**		**189000**		**222000**		**162000**	
General Chemistry																															
Cyanide, Total	200	**1100**		**1090**		**789**		**799**		**890**		**1780**		**1500**		**1060**		**1680**		**612**		126		**1210**		**1000**		156		**910**		**820**	

Notes:
1. 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).
2. Only compounds with exceedances are shown in the table.
3. NYSDEC TOGS 1.1.1 AWQS exceedances are highlighted and bolded.
4. Reporting Limits (RL) above AWQS standards are italicized.
5. µg/L = micrograms per liter
6. VOCs = Volatile Organic Compounds
7. SVOCs = Semivolatile Organic Compounds
8. NA = Not Analyzed
9. Monitoring well MW-S was destroyed during construction activities. No data is available for the 3rd Quarter 2009.
10. 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

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

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

		Park Area Southern Well[6]																			
		2009		2010					2011	2012	2013	2014	2015	2016	2017						
		1st Quarter	2nd Quarter	4th Quarter[7]	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	Year 7						
LOCATION	**NYSDEC TOGS**	**MW-S-3-16-09**	**MW-S-6-17-09**	**MW-S2-1-7-2010**	**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**	**MW-S2_101414**	**MW-S2_101615**	**MW-S2_101416**	**MW-S2_100917**						
SAMPLING DATE	**1.1.1 AWQS**	**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**	**10/14/2014**	**10/16/2015**	**10/14/2016**	**10/9/2017**						
LAB SAMPLE ID		**L0903143-02**	**L0908040-02**	**L1000282-02**	**L1003006-02**	**L1008735-01**	**L1013903-02**	**L1020042-02**	**L1116955-01**	**L1218727-01**	**L1320135-01**	**L1424443-02**	**L1526418-01**	**L16331228-01**	**L1736330-01**						
VOCs (µg/L)																					
1,2,4-Trimethylbenzene	5	**76**	*25* U	**280**	**130**	**180**	**150**	**200**	**45**	**79**	**26**	**7.2**	**6.8**	3.2	3.2						
1,3,5-Trimethylbenzene	5	*62* U	*25* U	**61**	*120* U	*120* U	*120* U	*120* U	*12* U	3 J	*10* U	2.5 U	1 J	2.5 U	2.5 U						
Benzene	1	**140**	**170**	**200**	**75**	**120**	**110**	**120**	**23**	**94**	**99**	**44**	**26**	**39**	**24**						
Bromomethane	5	*25* U	*10* U	*10* U	*50* U	*50* U	*50* U	*50* U	5 U	*6.2* U	*10* U	2.5 U	2.5 U	2.5 U	2.5 U						
Ethylbenzene	5	**160**	**20**	**710**	**330**	**590**	**460**	**560**	**100**	**260**	**160**	**60**	**41**	**42**	**29**						
Isopropylbenzene	5	**35**	**5.4**	**64**	**30**	**61**	**44**	**63**	**13**	**55**	**46**	**19**	**15**	**18**	**13**						
Methylene chloride	5	*120* U	*50* U	**420**	*250* U	*250* U	*250* U	*250* U	*25* U	*6.2* U	*10* U	2.5 U	2.5 U	2.5 U	2.5 U						
Naphthalene	10	**610**	**350**	**4900**	**1800**	**1700**	**1900**	**1100**	**170**	**150**	**62**	**36**	**50**	**15**	**18**						
n-Butylbenzene	5	*12* U	5 U	**6.2**	*25* U	*25* U	*25* U	*25* U	2.5 U	*6.2* U	*10* U	0.77 J	2.5 U	2.5 U	2.5 U						
n-Propylbenzene	5	**19**	5 U	**42**	*25* U	**37**	**30**	**37**	**8.5**	**34**	**22**	**9.3**	**5.6**	**7.5**	4.3						
o-Xylene	5	**43**	**16**	**320**	**110**	**150**	**70**	*50* U	**24**	**20**	**12**	**12**	**10**	**16**	**11**						
p/m-Xylene	5	**50**	**21**	**410**	**150**	**150**	**82**	*50* U	**17**	**9.2**	*10* U	4.8	4.2	4.8	3.4						
p-Isopropyltoluene	5	*12* U	5 U	**11**	*25* U	*25* U	*25* U	*25* U	2.5 U	*6.2* U	*10* U	2.5 U	2.5 U	2.5 U	2.5 U						
Styrene	5	*25* U	*10* U	**40**	*50* U	*50* U	*50* U	*50* U	5 U	*6.2* U	*10* U	2.5 U	2.5 U	2.5 U	2.5 U						
Toluene	5	*19* U	**29**	**180**	**46**	*38* U	*38* U	*38* U	**8.5**	4.2 J	*10* U	3	1.7 J	2.3 J	1.8 J						
SVOCs (µg/L)																					
2,4-Dimethylphenol	50	10 U	10 U	10 U	*500* U	10 U	10 U	10 U	5 U	5 U	25 U	25 U	5 U	5 U	4.8 U						
Acenaphthene	20	14	0.2 U	*200* U	**63**	**59**	**41**	**63**	15	**49**	**39**	**34**	17	16	9.9						
Benzo(a)anthracene	0.002	*0.2* U	*0.2* U	*200* U	*10* U	**4.4**	*10* U	**18**	**4.2**	**6.3**	**6.5**	**3.4**	**2.2**	**0.36**	**0.46**						
Benzo(a)pyrene	0	*0.2* U	*0.2* U	*200* U	**15**	**4.8**	*10* U	**17**	**4**	**5.4**	**6.4**	**2.6**	**2.2**	**0.48**	**0.4**						
Benzo(b)fluoranthene	0.002	*0.2* U	*0.2* U	*200* U	**14**	**3.4**	*10* U	**17**	**2.9**	**3**	**4.7**	**3.9**	**1.7**	**0.4**	**0.28**						
Benzo(k)fluoranthene	0.002	*0.2* U	*0.2* U	*200* U	*10* U	*2* U	*10* U	*10* U	**1.5**	**3.2**	**3.3**	**1.2**	**0.65** J	**0.12** J	**0.09** J						
Biphenyl	5	**8.5**	*5.1* U	**49**	*250* U	**46**	**27**	**55**	**6.9**	**26**	**13**	*10* U	2.6 U	2 U	1.9 U						
Bis(2-Ethylhexyl)phthalate	5	5 U	*5.1* U	5 U	*250* U	5 U	5 U	5 U	3 U	3 U	*15* U	*15* U	3 U	3 U	2.9						
Chrysene	0.002	*0.2* U	*0.2* U	*200* U	*10* U	**4**	*10* U	*10* U	**3.2**	**5.3**	**6**	**3.3**	**2.1**	**0.34**	**0.38**						
Fluoranthene	50	1.6	0.2 U	*200* U	27	15	12	18	9	16	15	12	5.3	2.5	2						
Fluorene	50	8.9	0.2 U	*200* U	**61**	**53**	36	42	13	33	16	6.1	4.2	3.4	2.1						
Indeno(1,2,3-cd)Pyrene	0.002	*0.2* U	*0.2* U	*200* U	*10* U	*2* U	*10* U	**15**	**1.8**	**3.3**	**3.1**	**2.1**	**0.83** J	**0.38**	**0.26**						
Naphthalene	10	**300**	0.62	**11000**	**1400**	**1600**	**990**	**400**	9.3	**90**	**51**	**19**	**23**	10	10						
Phenanthrene	50	-	0.2 U	*200* U	**120**	**74**	**52**	**63**	16	32	11	25	5.4	0.44	0.51						
Phenol	1	*7* U	*7.2* U	**7.7**	*350* U	*7* U	*7* U	*7* U	*5* U	*5* U	*25* U	*25* U	*5* U	*5* U	*4.8* U						
Pyrene	50	1.2	0.2 U	NT	10 U	20	15	25	12	23	21	18	8.1	2.4	2.6						
Total Metals																					
Arsenic, Total	25	20	6	17	13	10	18	19	13	10.5	9.04	18.2	5.4	6.8	8.5						
Iron, Total	300	**21000**	**9200**	**3200**	**11000**	**5000**	**9800**	**12000**	**9900**	**12100**	**5830**	**33400**	**5800**	**10.300**	**12800**						
Lead, Total	25	**158**	**45**	17	**117**	**29**	**86**	**166**	**42**	**108.7**	**70.29**	**366.9**	13.3	13.1	16.68						
Magnesium, Total	35000	**71000**	**48000**	**120000**	**87000**	**85000**	**93000**	**84000**	**68000**	**43800**	**53800**	**95500**	**81100**	**91200**	**69500**						
Manganese, Total	300	**598**	**403**	**327**	**636**	**430**	**492**	**558**	**537**	**574.9**	279.6	**1074**	**529.7**	**519.1**	**389.3**						
Mercury, Total	0.7	0.5	0.2 U	0.3	0.6	0.2	0.5	**0.9**	0.2 U	**0.8**	0.2 U	**1.58**	0.12 J	0.12 J	0.19 J						
Sodium, Total	20000	**96000**	**100000**	**98000**	**89000**	**68000**	**76000**	**67000**	**42000**	**32600**	**49400**	**71700**	**56600**	**66700**	**60900**						
General Chemistry																					
Cyanide, Total	200	**1920**	**1920**	**1090**	**973**	**1110**	**1540**	**1410**	**798**	152	**1030**	**1380**	135	**842**	**598**						

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

		Quality Control																	
		2009				2010					2011	2012	2015	2016	2017				
		1st Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	YEAR 1	YEAR 2	YEAR 5	YEAR 6	YEAR 7				
LOCATION	**NYSDEC TOGS**	**FB-3-16-09**	**TRIP BLANK**	**TRIP BLANK**	**TRIP BLANK**	**TRIP BLANK-1-7-2010**	**TB-3-01-10**	**TB-6-10-10**	**TB-9-8-10**	**TB-12-15-10**	**TRIP BLANK-101711**	**TRIP BLANK**	**TB01_101615**	**TB01_101416**	**TB01_100917**				
SAMPLING DATE	**1.1.1 AWQS**	**3/16/2009**	**3/16/2009**	**6/17/2009**	**9/18/2009**	**1/7/2010**	**3/1/2010**	**6/10/2010**	**9/8/2010**	**12/15/2010**	**10/17/2011**	**10/17/2012**	**10/16/2015**	**10/14/2016**	**10/16/2017**				
LAB SAMPLE ID		**L0903143-04**	**L0903143-05**	**L0908040-03**	**L0913185-02**	**L1000282-03**	**L1003006-03**	**L1008735-03**	**L1013903-03**	**L1020042-03**	**L1116955-03**	**L1218727-03**	**L1526418-04**	**L1633122-04**	**L1736330-04**				
VOCs (µg/L)																			
1,2,4-Trimethylbenzene	5	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U				
1,3,5-Trimethylbenzene	5	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U				
Benzene	1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U				
Bromomethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U				
Ethylbenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U	2.5 U	2.5 U				
Isopropylbenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U	2.5 U	2.5 U				
Methylene chloride	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2.5 U	2.5 U	2.5 U	2.5 U				
Naphthalene	10	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U				
n-Butylbenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U	2.5 U	2.5 U				
n-Propylbenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U	2.5 U	2.5 U				
o-Xylene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U				
p/m-Xylene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 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	0.5 U	2.5 U	2.5 U	2.5 U	2.5 U				
Styrene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U				
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	2.5 U	2.5 U	2.5 U	2.5 U				
SVOCs (µg/L)																			
2,4-Dimethylphenol	50	9.6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Acenaphthene	20	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Benzo(a)anthracene	0.002	*0.19* U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Benzo(a)pyrene	0	*0.19* U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Benzo(b)fluoranthene	0.002	*0.19* U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Benzo(k)fluoranthene	0.002	*0.19* U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Biphenyl	5	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Bis(2-Ethylhexyl)phthalate	5	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Chrysene	0.002	*0.19* U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Fluoranthene	50	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Fluorene	50	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Indeno(1,2,3-cd)Pyrene	0.002	*0.19* U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Naphthalene	10	0.34	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Phenanthrene	50	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Phenol	1	*6.7* U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Pyrene	50	0.2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Total Metals																			
Arsenic, Total	25	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Iron, Total	300	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Lead, Total	25	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Magnesium, Total	35000	100 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Manganese, Total	300	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Mercury, Total	0.7	0.2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Sodium, Total	20000	2000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
General Chemistry																			
Cyanide, Total	200	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				

Notes:
1. 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).
2. Only compounds with exceedances are shown in the table.
3. NYSDEC TOGS 1.1.1 AWQS exceedances are highlighted and bolded.
4. Reporting Limits (RL) above AWQS standards are italicized.
5. µg/L = micrograms per liter
6. VOCs = Volatile Organic Compounds
7. SVOCs = Semivolatile Organic Compounds
8. NA = Not Analyzed
9. Monitoring well MW-S was destroyed during construction activities. No data is available for the 3rd Quarter 2009.
10. 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

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

ATTACHMENT A
GROUNDWATER SAMPLING FORMS

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: River Place I & II	**Well#/Location: MW-S2**	**Job 170040901**
Date: 10/09/17	**Weather: 70's Rain/Overcast**	**Sampling Personnel: Joe Yanowitz**

Well Information

Sample ID	MW-S2_100917
Well Depth (ft)	-
Screened Interval (ft)	-
Casing Elevation (msl)	-
Casing Diameter (in)	2
Depth to Water (ft)	9.52
Water Elevation (msl)	-
Casing Volume (gal)	-
PID/FID Reading (ppm)	0

Purging Information

Purging Method	Low Flow
Purging Rate (gpm)	0.05
Start Purge Time	9:50
End Purge Time	10:25
Volume Purged (gal)	1.75

Sampling Information

Sampling Method	Low Flow
Start Sampling Time	10:30
End Sampling Time	10:45
Depth Before Sampling (ft)	10.1
Number Bottles Collected	8

	Parameters							
Sample Time	**Temp (°C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
9:55	20.26	7.44	-148	1.54	253	1.30	9.80	0.25
10:00	20.56	6.87	-130	1.54	260	0.65	9.80	0.50
10:05	20.56	6.71	-124	1.54	152	0.50	9.90	0.75
10:10	20.46	6.58	-123	1.55	97.3	0.43	10.00	1.00
10:15	20.91	6.47	-120	1.55	73.0	0.38	10.00	1.25
10:20	20.79	6.41	-118	1.56	68.4	0.33	10.10	1.50
10:25	20.79	6.38	-116	1.56	62.6	0.30	10.10	1.75
10:30	**Collect Sample**						10.1	1.75

Notes/Remarks

Stablility

PH - ± 0.1 unit

Specific Conductance - ± 3%

Temperature - ± 3%

Dissolved Oxygen - ±10% above 0.5 mg/L

Turbidity - ± 10% above 5 NTU

ORP/Eh - ±10 millivolts

Maximum flow rate - <0.5 L/m or 0.13 gpm

Maximum drawdown - <0.33 feet

Purge water was consistently turbid with black fines and had a slight sheen.

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: River Place I & II	**Well#/Location: MW-N2**	**Job 170040901**
Date: 10/09/17	**Weather:70's Rain/Overcast**	**Sampling Personnel: Joe Yanowitz**

Well Information

Sample ID	MW-N2_100917
Well Depth (ft)	-
Screened Interval (ft)	-
Casing Elevation (msl)	-
Casing Diameter (in)	2
Depth to Water (ft)	9.22
Water Elevation (msl)	-
Casing Volume (gal)	-
PID/FID Reading (ppm)	0

Purging Information

Purging Method	Low Flow
Purging Rate (gpm)	0.03
Start Purge Time	8:00
End Purge Time	8:55
Volume Purged (gal)	1.8

Sampling Information

Sampling Method	Low Flow
Start Sampling Time	9:00
End Sampling Time	9:18
Depth Before Sampling (ft)	9.4
Number Bottles Collected	8

	Parameters							
Sample Time	**Temp (°C)**	**pH**	**ORP (mV)**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Depth to Water (ft)**	**Purged Volume (gallons)**
8:25	21.46	6.79	-76	2.58	24.0	2.88	9.38	0.10
8:30	20.27	6.81	-93	2.43	23.0	1.81	9.40	0.50
8:35	20.02	6.82	-92	2.23	13.6	1.64	9.38	0.80
8:40	20.6	6.81	-90	2.18	9.3	1.44	9.38	1.00
8:45	2.33	6.86	-91	2.10	5.8	1.26	9.38	1.30
8:50	20.15	6.87	-90	2.08	3.5	1.16	9.40	1.60
8:55	20.09	6.87	-90	2.10	3.1	1.16	9.40	1.80
9:00	**Collect Sample**						9.4	1.80

Notes/Remarks

Stablility

PH - ± 0.1 unit

Specific Conductance - ± 3%

Temperature - ± 3%

Dissolved Oxygen - ±10% above 0.5 mg/L

Turbidity - ± 10% above 5 NTU

ORP/Eh - ±10 millivolts

Maximum flow rate - <0.5 L/m or 0.13 gpm

Maximum drawdown - <0.33 feet

Purged water had a yellowish tint

Remember: Battery Connections - **RED** is **POSITIVE** and **BLACK** is **NEGATIVE**

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

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

ANALYTICAL REPORT

Lab Number:	L1736330
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Kimberly Del Col
Phone:	(212) 479-5486
Project Name:	RIVER PLACE I + II
Project Number:	170040901
Report Date:	10/16/17

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

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: L1736330
Report Date: 10/16/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1736330-01	MW-N2_100917	WATER	NY, NY	10/09/17 09:00	10/09/17
L1736330-02	MW-S2_100917	WATER	NY, NY	10/09/17 10:30	10/09/17
L1736330-03	DRUM_100917	WATER	NY, NY	10/09/17 11:00	10/09/17
L1736330-04	TB01_100917	WATER	NY, NY	10/09/17 00:00	10/09/17

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

Lab Number: L1736330
Report Date: 10/16/17

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 NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. 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. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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

Please see the associated 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	**Lab Number:**	L1736330
Project Number:	170040901	**Report Date:**	10/16/17

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

The WG1050680-5 MS recovery (160%), performed on L1736330-02, is outside the acceptance criteria; however, the associated LCS recovery is within criteria. No further action was taken.

The WG1050680-4 Laboratory Duplicate RPD (59%), performed on L1736330-01, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

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: 10/16/17

ORGANICS

VOLATILES

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-01 D
Client ID: MW-N2_100917
Sample Location: NY, NY

Date Collected: 10/09/17 09:00
Date Received: 10/09/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/16/17 03:58
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	62	18.	25
1,1-Dichloroethane	ND		ug/l	62	18.	25
Chloroform	ND		ug/l	62	18.	25
Carbon tetrachloride	ND		ug/l	12	3.4	25
1,2-Dichloropropane	ND		ug/l	25	3.4	25
Dibromochloromethane	ND		ug/l	12	3.7	25
1,1,2-Trichloroethane	ND		ug/l	38	12.	25
Tetrachloroethene	ND		ug/l	12	4.5	25
Chlorobenzene	ND		ug/l	62	18.	25
Trichlorofluoromethane	ND		ug/l	62	18.	25
1,2-Dichloroethane	ND		ug/l	12	3.3	25
1,1,1-Trichloroethane	ND		ug/l	62	18.	25
Bromodichloromethane	ND		ug/l	12	4.8	25
trans-1,3-Dichloropropene	ND		ug/l	12	4.1	25
cis-1,3-Dichloropropene	ND		ug/l	12	3.6	25
1,3-Dichloropropene, Total	ND		ug/l	12	3.6	25
1,1-Dichloropropene	ND		ug/l	62	18.	25
Bromoform	ND		ug/l	50	16.	25
1,1,2,2-Tetrachloroethane	ND		ug/l	12	4.2	25
Benzene	880		ug/l	12	4.0	25
Toluene	38	J	ug/l	62	18.	25
Ethylbenzene	190		ug/l	62	18.	25
Chloromethane	ND		ug/l	62	18.	25
Bromomethane	ND		ug/l	62	18.	25
Vinyl chloride	ND		ug/l	25	1.8	25
Chloroethane	ND		ug/l	62	18.	25
1,1-Dichloroethene	ND		ug/l	12	4.2	25
trans-1,2-Dichloroethene	ND		ug/l	62	18.	25
Trichloroethene	ND		ug/l	12	4.4	25
1,2-Dichlorobenzene	ND		ug/l	62	18.	25

Project Name: RIVER PLACE I + II **Lab Number:** L1736330

Project Number: 170040901 **Report Date:** 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-01 D Date Collected: 10/09/17 09:00

Client ID: MW-N2_100917 Date Received: 10/09/17

Sample Location: NY, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	62	18.	25
1,4-Dichlorobenzene	ND		ug/l	62	18.	25
Methyl tert butyl ether	ND		ug/l	62	18.	25
p/m-Xylene	190		ug/l	62	18.	25
o-Xylene	200		ug/l	62	18.	25
Xylenes, Total	390		ug/l	62	18.	25
cis-1,2-Dichloroethene	ND		ug/l	62	18.	25
1,2-Dichloroethene, Total	ND		ug/l	62	18.	25
Dibromomethane	ND		ug/l	120	25.	25
1,2,3-Trichloropropane	ND		ug/l	62	18.	25
Acrylonitrile	ND		ug/l	120	38.	25
Styrene	ND		ug/l	62	18.	25
Dichlorodifluoromethane	ND		ug/l	120	25.	25
Acetone	ND		ug/l	120	36.	25
Carbon disulfide	ND		ug/l	120	25.	25
2-Butanone	ND		ug/l	120	48.	25
Vinyl acetate	ND		ug/l	120	25.	25
4-Methyl-2-pentanone	ND		ug/l	120	25.	25
2-Hexanone	ND		ug/l	120	25.	25
Bromochloromethane	ND		ug/l	62	18.	25
2,2-Dichloropropane	ND		ug/l	62	18.	25
1,2-Dibromoethane	ND		ug/l	50	16.	25
1,3-Dichloropropane	ND		ug/l	62	18.	25
1,1,1,2-Tetrachloroethane	ND		ug/l	62	18.	25
Bromobenzene	ND		ug/l	62	18.	25
n-Butylbenzene	ND		ug/l	62	18.	25
sec-Butylbenzene	ND		ug/l	62	18.	25
tert-Butylbenzene	ND		ug/l	62	18.	25
o-Chlorotoluene	ND		ug/l	62	18.	25
p-Chlorotoluene	ND		ug/l	62	18.	25
1,2-Dibromo-3-chloropropane	ND		ug/l	62	18.	25
Hexachlorobutadiene	ND		ug/l	62	18.	25
Isopropylbenzene	ND		ug/l	62	18.	25
p-Isopropyltoluene	ND		ug/l	62	18.	25
Naphthalene	3900		ug/l	62	18.	25
n-Propylbenzene	ND		ug/l	62	18.	25
1,2,3-Trichlorobenzene	ND		ug/l	62	18.	25
1,2,4-Trichlorobenzene	ND		ug/l	62	18.	25
1,3,5-Trimethylbenzene	25	J	ug/l	62	18.	25

Project Name: RIVER PLACE I + II **Lab Number:** L1736330

Project Number: 170040901 **Report Date:** 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-01 D Date Collected: 10/09/17 09:00

Client ID: MW-N2_100917 Date Received: 10/09/17

Sample Location: NY, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	82		ug/l	62	18.	25
1,4-Dioxane	ND		ug/l	6200	1500	25
p-Diethylbenzene	ND		ug/l	50	18.	25
p-Ethyltoluene	37	J	ug/l	50	18.	25
1,2,4,5-Tetramethylbenzene	ND		ug/l	50	14.	25
Ethyl ether	ND		ug/l	62	18.	25
trans-1,4-Dichloro-2-butene	ND		ug/l	62	18.	25

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	99		70-130

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-02
Client ID: MW-S2_100917
Sample Location: NY, NY

Date Collected: 10/09/17 10:30
Date Received: 10/09/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/16/17 03:01
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	24		ug/l	0.50	0.16	1
Toluene	1.8	J	ug/l	2.5	0.70	1
Ethylbenzene	29		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: RIVER PLACE I + II **Lab Number:** L1736330

Project Number: 170040901 **Report Date:** 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-02 Date Collected: 10/09/17 10:30

Client ID: MW-S2_100917 Date Received: 10/09/17

Sample Location: NY, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	3.4		ug/l	2.5	0.70	1
o-Xylene	11		ug/l	2.5	0.70	1
Xylenes, Total	14		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	1.9	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	13		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	18		ug/l	2.5	0.70	1
n-Propylbenzene	4.3		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: RIVER PLACE I + II
Lab Number: L1736330
Project Number: 170040901
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-02
Client ID: MW-S2_100917
Sample Location: NY, NY
Date Collected: 10/09/17 10:30
Date Received: 10/09/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	3.2		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	0.92	J	ug/l	2.0	0.70	1
p-Ethyltoluene	2.1		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	1.4	J	ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	100		70-130

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-03 D
Client ID: DRUM_100917
Sample Location: NY, NY

Date Collected: 10/09/17 11:00
Date Received: 10/09/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/16/17 03:30
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	25	7.0	10
1,1-Dichloroethane	ND		ug/l	25	7.0	10
Chloroform	ND		ug/l	25	7.0	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
1,2-Dichloropropane	ND		ug/l	10	1.4	10
Dibromochloromethane	ND		ug/l	5.0	1.5	10
1,1,2-Trichloroethane	ND		ug/l	15	5.0	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	25	7.0	10
Trichlorofluoromethane	ND		ug/l	25	7.0	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
1,1,1-Trichloroethane	ND		ug/l	25	7.0	10
Bromodichloromethane	ND		ug/l	5.0	1.9	10
trans-1,3-Dichloropropene	ND		ug/l	5.0	1.6	10
cis-1,3-Dichloropropene	ND		ug/l	5.0	1.4	10
1,3-Dichloropropene, Total	ND		ug/l	5.0	1.4	10
1,1-Dichloropropene	ND		ug/l	25	7.0	10
Bromoform	ND		ug/l	20	6.5	10
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	1.7	10
Benzene	190		ug/l	5.0	1.6	10
Toluene	ND		ug/l	25	7.0	10
Ethylbenzene	33		ug/l	25	7.0	10
Chloromethane	ND		ug/l	25	7.0	10
Bromomethane	ND		ug/l	25	7.0	10
Vinyl chloride	ND		ug/l	10	0.71	10
Chloroethane	ND		ug/l	25	7.0	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
trans-1,2-Dichloroethene	ND		ug/l	25	7.0	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,2-Dichlorobenzene	ND		ug/l	25	7.0	10

Project Name: RIVER PLACE I + II **Lab Number:** L1736330

Project Number: 170040901 **Report Date:** 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-03 D Date Collected: 10/09/17 11:00

Client ID: DRUM_100917 Date Received: 10/09/17

Sample Location: NY, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	25	7.0	10
1,4-Dichlorobenzene	ND		ug/l	25	7.0	10
Methyl tert butyl ether	ND		ug/l	25	7.0	10
p/m-Xylene	22	J	ug/l	25	7.0	10
o-Xylene	37		ug/l	25	7.0	10
Xylenes, Total	59	J	ug/l	25	7.0	10
cis-1,2-Dichloroethene	ND		ug/l	25	7.0	10
1,2-Dichloroethene, Total	ND		ug/l	25	7.0	10
Dibromomethane	ND		ug/l	50	10.	10
1,2,3-Trichloropropane	ND		ug/l	25	7.0	10
Acrylonitrile	ND		ug/l	50	15.	10
Styrene	ND		ug/l	25	7.0	10
Dichlorodifluoromethane	ND		ug/l	50	10.	10
Acetone	30	J	ug/l	50	15.	10
Carbon disulfide	ND		ug/l	50	10.	10
2-Butanone	ND		ug/l	50	19.	10
Vinyl acetate	ND		ug/l	50	10.	10
4-Methyl-2-pentanone	ND		ug/l	50	10.	10
2-Hexanone	ND		ug/l	50	10.	10
Bromochloromethane	ND		ug/l	25	7.0	10
2,2-Dichloropropane	ND		ug/l	25	7.0	10
1,2-Dibromoethane	ND		ug/l	20	6.5	10
1,3-Dichloropropane	ND		ug/l	25	7.0	10
1,1,1,2-Tetrachloroethane	ND		ug/l	25	7.0	10
Bromobenzene	ND		ug/l	25	7.0	10
n-Butylbenzene	ND		ug/l	25	7.0	10
sec-Butylbenzene	ND		ug/l	25	7.0	10
tert-Butylbenzene	ND		ug/l	25	7.0	10
o-Chlorotoluene	ND		ug/l	25	7.0	10
p-Chlorotoluene	ND		ug/l	25	7.0	10
1,2-Dibromo-3-chloropropane	ND		ug/l	25	7.0	10
Hexachlorobutadiene	ND		ug/l	25	7.0	10
Isopropylbenzene	ND		ug/l	25	7.0	10
p-Isopropyltoluene	ND		ug/l	25	7.0	10
Naphthalene	610		ug/l	25	7.0	10
n-Propylbenzene	ND		ug/l	25	7.0	10
1,2,3-Trichlorobenzene	ND		ug/l	25	7.0	10
1,2,4-Trichlorobenzene	ND		ug/l	25	7.0	10
1,3,5-Trimethylbenzene	ND		ug/l	25	7.0	10

Project Name: RIVER PLACE I + II
Lab Number: L1736330
Project Number: 170040901
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-03 D
Client ID: DRUM_100917
Sample Location: NY, NY
Date Collected: 10/09/17 11:00
Date Received: 10/09/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	13	J	ug/l	25	7.0	10
1,4-Dioxane	ND		ug/l	2500	610	10
p-Diethylbenzene	ND		ug/l	20	7.0	10
p-Ethyltoluene	ND		ug/l	20	7.0	10
1,2,4,5-Tetramethylbenzene	ND		ug/l	20	5.4	10
Ethyl ether	ND		ug/l	25	7.0	10
trans-1,4-Dichloro-2-butene	ND		ug/l	25	7.0	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	100		70-130

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-04
Client ID: TB01_100917
Sample Location: NY, NY

Date Collected: 10/09/17 00:00
Date Received: 10/09/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/13/17 04:29
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: RIVER PLACE I + II **Lab Number:** L1736330

Project Number: 170040901 **Report Date:** 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-04 Date Collected: 10/09/17 00:00

Client ID: TB01_100917 Date Received: 10/09/17

Sample Location: NY, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	3.2	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	2.0	J	ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: RIVER PLACE I + II **Lab Number:** L1736330

Project Number: 170040901 **Report Date:** 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-04 Date Collected: 10/09/17 00:00

Client ID: TB01_100917 Date Received: 10/09/17

Sample Location: NY, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	0.82	J	ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	99		70-130

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/12/17 20:55
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG1052046-5					
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	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
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	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/12/17 20:55
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG1052046-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
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

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/12/17 20:55
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG1052046-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
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	108		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	99		70-130

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/15/17 18:54
Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1052814-5					
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	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
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	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

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

Lab Number: L1736330
Report Date: 10/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/15/17 18:54
Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1052814-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
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

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/15/17 18:54
Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1052814-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
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	108		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	100		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1736330

Report Date: 10/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG1052046-3 WG1052046-4								
Methylene chloride	100		90		70-130	11		20
1,1-Dichloroethane	100		96		70-130	4		20
Chloroform	100		93		70-130	7		20
Carbon tetrachloride	92		85		63-132	8		20
1,2-Dichloropropane	110		96		70-130	14		20
Dibromochloromethane	96		86		63-130	11		20
1,1,2-Trichloroethane	100		93		70-130	7		20
Tetrachloroethene	93		86		70-130	8		20
Chlorobenzene	98		89		75-130	10		20
Trichlorofluoromethane	94		89		62-150	5		20
1,2-Dichloroethane	110		99		70-130	11		20
1,1,1-Trichloroethane	97		90		67-130	7		20
Bromodichloromethane	100		93		67-130	7		20
trans-1,3-Dichloropropene	99		89		70-130	11		20
cis-1,3-Dichloropropene	100		90		70-130	11		20
1,1-Dichloropropene	99		91		70-130	8		20
Bromoform	94		86		54-136	9		20
1,1,2,2-Tetrachloroethane	99		92		67-130	7		20
Benzene	99		91		70-130	8		20
Toluene	98		90		70-130	9		20
Ethylbenzene	100		92		70-130	8		20
Chloromethane	84		78		64-130	7		20
Bromomethane	44		55		39-139	**22**	Q	20

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1736330

Report Date: 10/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG1052046-3 WG1052046-4								
Vinyl chloride	92		87		55-140	6		20
Chloroethane	110		100		55-138	10		20
1,1-Dichloroethene	94		89		61-145	5		20
trans-1,2-Dichloroethene	96		88		70-130	9		20
Trichloroethene	99		89		70-130	11		20
1,2-Dichlorobenzene	95		88		70-130	8		20
1,3-Dichlorobenzene	97		90		70-130	7		20
1,4-Dichlorobenzene	97		89		70-130	9		20
Methyl tert butyl ether	100		92		63-130	8		20
p/m-Xylene	105		90		70-130	15		20
o-Xylene	100		90		70-130	11		20
cis-1,2-Dichloroethene	98		92		70-130	6		20
Dibromomethane	100		94		70-130	6		20
1,2,3-Trichloropropane	91		84		64-130	8		20
Acrylonitrile	100		96		70-130	4		20
Styrene	100		90		70-130	11		20
Dichlorodifluoromethane	80		76		36-147	5		20
Acetone	97		91		58-148	6		20
Carbon disulfide	89		83		51-130	7		20
2-Butanone	110		100		63-138	10		20
Vinyl acetate	100		93		70-130	7		20
4-Methyl-2-pentanone	100		96		59-130	4		20
2-Hexanone	97		89		57-130	9		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1736330

Report Date: 10/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG1052046-3 WG1052046-4								
Bromochloromethane	100		91		70-130	9		20
2,2-Dichloropropane	100		93		63-133	7		20
1,2-Dibromoethane	99		91		70-130	8		20
1,3-Dichloropropane	100		94		70-130	6		20
1,1,1,2-Tetrachloroethane	95		86		64-130	10		20
Bromobenzene	96		89		70-130	8		20
n-Butylbenzene	100		96		53-136	4		20
sec-Butylbenzene	100		91		70-130	9		20
tert-Butylbenzene	98		90		70-130	9		20
o-Chlorotoluene	100		92		70-130	8		20
p-Chlorotoluene	99		91		70-130	8		20
1,2-Dibromo-3-chloropropane	82		77		41-144	6		20
Hexachlorobutadiene	87		88		63-130	1		20
Isopropylbenzene	100		92		70-130	8		20
p-Isopropyltoluene	100		92		70-130	8		20
Naphthalene	100		90		70-130	11		20
n-Propylbenzene	100		94		69-130	6		20
1,2,3-Trichlorobenzene	85		86		70-130	1		20
1,2,4-Trichlorobenzene	90		87		70-130	3		20
1,3,5-Trimethylbenzene	100		92		64-130	8		20
1,2,4-Trimethylbenzene	110		95		70-130	15		20
1,4-Dioxane	98		116		56-162	17		20
p-Diethylbenzene	100		92		70-130	8		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1736330

Report Date: 10/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG1052046-3 WG1052046-4								
p-Ethyltoluene	110		94		70-130	16		20
1,2,4,5-Tetramethylbenzene	100		88		70-130	13		20
Ethyl ether	100		93		59-134	7		20
trans-1,4-Dichloro-2-butene	84		100		70-130	17		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	113		113		70-130
Toluene-d8	100		101		70-130
4-Bromofluorobenzene	100		100		70-130
Dibromofluoromethane	101		100		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1736330

Report Date: 10/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1052814-3 WG1052814-4								
Methylene chloride	90		96		70-130	6		20
1,1-Dichloroethane	92		98		70-130	6		20
Chloroform	89		96		70-130	8		20
Carbon tetrachloride	83		90		63-132	8		20
1,2-Dichloropropane	94		99		70-130	5		20
Dibromochloromethane	86		93		63-130	8		20
1,1,2-Trichloroethane	92		100		70-130	8		20
Tetrachloroethene	82		87		70-130	6		20
Chlorobenzene	85		92		75-130	8		20
Trichlorofluoromethane	86		91		62-150	6		20
1,2-Dichloroethane	98		100		70-130	2		20
1,1,1-Trichloroethane	87		93		67-130	7		20
Bromodichloromethane	91		98		67-130	7		20
trans-1,3-Dichloropropene	88		96		70-130	9		20
cis-1,3-Dichloropropene	90		98		70-130	9		20
1,1-Dichloropropene	89		95		70-130	7		20
Bromoform	87		97		54-136	11		20
1,1,2,2-Tetrachloroethane	91		100		67-130	9		20
Benzene	87		94		70-130	8		20
Toluene	85		91		70-130	7		20
Ethylbenzene	87		93		70-130	7		20
Chloromethane	76		78		64-130	3		20
Bromomethane	76		79		39-139	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1736330

Report Date: 10/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1052814-3 WG1052814-4								
Vinyl chloride	82		86		55-140	5		20
Chloroethane	100		100		55-138	0		20
1,1-Dichloroethene	85		91		61-145	7		20
trans-1,2-Dichloroethene	86		91		70-130	6		20
Trichloroethene	84		93		70-130	10		20
1,2-Dichlorobenzene	86		92		70-130	7		20
1,3-Dichlorobenzene	86		92		70-130	7		20
1,4-Dichlorobenzene	86		91		70-130	6		20
Methyl tert butyl ether	93		100		63-130	7		20
p/m-Xylene	90		95		70-130	5		20
o-Xylene	90		95		70-130	5		20
cis-1,2-Dichloroethene	89		93		70-130	4		20
Dibromomethane	93		100		70-130	7		20
1,2,3-Trichloropropane	83		92		64-130	10		20
Acrylonitrile	98		110		70-130	12		20
Styrene	90		95		70-130	5		20
Dichlorodifluoromethane	68		72		36-147	6		20
Acetone	96		100		58-148	4		20
Carbon disulfide	81		86		51-130	6		20
2-Butanone	79		91		63-138	14		20
Vinyl acetate	96		100		70-130	4		20
4-Methyl-2-pentanone	92		100		59-130	8		20
2-Hexanone	79		89		57-130	12		20

Lab Control Sample Analysis
Batch Quality Control

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

Lab Number: L1736330
Report Date: 10/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1052814-3 WG1052814-4								
Bromochloromethane	93		100		70-130	7		20
2,2-Dichloropropane	89		97		63-133	9		20
1,2-Dibromoethane	88		98		70-130	11		20
1,3-Dichloropropane	91		100		70-130	9		20
1,1,1,2-Tetrachloroethane	84		90		64-130	7		20
Bromobenzene	85		89		70-130	5		20
n-Butylbenzene	94		98		53-136	4		20
sec-Butylbenzene	89		94		70-130	5		20
tert-Butylbenzene	87		91		70-130	4		20
o-Chlorotoluene	72		92		70-130	**24**	Q	20
p-Chlorotoluene	88		93		70-130	6		20
1,2-Dibromo-3-chloropropane	86		96		41-144	11		20
Hexachlorobutadiene	93		95		63-130	2		20
Isopropylbenzene	87		92		70-130	6		20
p-Isopropyltoluene	89		93		70-130	4		20
Naphthalene	93		100		70-130	7		20
n-Propylbenzene	90		95		69-130	5		20
1,2,3-Trichlorobenzene	93		100		70-130	7		20
1,2,4-Trichlorobenzene	90		98		70-130	9		20
1,3,5-Trimethylbenzene	87		92		64-130	6		20
1,2,4-Trimethylbenzene	88		92		70-130	4		20
1,4-Dioxane	106		122		56-162	14		20
p-Diethylbenzene	89		93		70-130	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1736330

Report Date: 10/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1052814-3 WG1052814-4								
p-Ethyltoluene	88		92		70-130	4		20
1,2,4,5-Tetramethylbenzene	86		91		70-130	6		20
Ethyl ether	93		100		59-134	7		20
trans-1,4-Dichloro-2-butene	81		87		70-130	7		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	113		109		70-130
Toluene-d8	100		100		70-130
4-Bromofluorobenzene	100		100		70-130
Dibromofluoromethane	102		102		70-130

SEMIVOLATILES

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-01
Client ID: MW-N2_100917
Sample Location: NY, NY

Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 10/13/17 16:55
Analyst: CB

Date Collected: 10/09/17 09:00
Date Received: 10/09/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/12/17 00:49

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	4.9	0.65	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.66	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.72	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.68	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.70	1
3,3'-Dichlorobenzidine	ND		ug/l	4.9	1.4	1
2,4-Dinitrotoluene	ND		ug/l	4.9	0.84	1
2,6-Dinitrotoluene	ND		ug/l	4.9	1.1	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.62	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.72	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.69	1
Bis(2-chloroethoxy)methane	ND		ug/l	4.9	0.62	1
Hexachlorocyclopentadiene	ND		ug/l	20	7.8	1
Isophorone	ND		ug/l	4.9	0.59	1
Nitrobenzene	ND		ug/l	2.0	0.74	1
NDPA/DPA	ND		ug/l	2.0	0.64	1
n-Nitrosodi-n-propylamine	ND		ug/l	4.9	0.69	1
Bis(2-ethylhexyl)phthalate	3.4		ug/l	3.0	0.90	1
Butyl benzyl phthalate	ND		ug/l	4.9	1.2	1
Di-n-butylphthalate	ND		ug/l	4.9	0.68	1
Di-n-octylphthalate	ND		ug/l	4.9	1.1	1
Diethyl phthalate	ND		ug/l	4.9	0.62	1
Dimethyl phthalate	ND		ug/l	4.9	0.64	1
Biphenyl	23.		ug/l	2.0	0.75	1
4-Chloroaniline	ND		ug/l	4.9	0.62	1
2-Nitroaniline	ND		ug/l	4.9	1.1	1
3-Nitroaniline	ND		ug/l	4.9	1.2	1
4-Nitroaniline	ND		ug/l	4.9	1.3	1
Dibenzofuran	40.		ug/l	2.0	0.65	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	9.9	0.66	1

Project Name: RIVER PLACE I + II
Lab Number: L1736330
Project Number: 170040901
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-01
Client ID: MW-N2_100917
Sample Location: NY, NY
Date Collected: 10/09/17 09:00
Date Received: 10/09/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acetophenone	8.8		ug/l	4.9	0.84	1
2,4,6-Trichlorophenol	ND		ug/l	4.9	0.67	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.61	1
2-Chlorophenol	ND		ug/l	2.0	0.62	1
2,4-Dichlorophenol	ND		ug/l	4.9	0.76	1
2,4-Dimethylphenol	100		ug/l	4.9	1.6	1
2-Nitrophenol	ND		ug/l	9.9	1.5	1
4-Nitrophenol	ND		ug/l	9.9	1.8	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
4,6-Dinitro-o-cresol	ND		ug/l	9.9	2.1	1
Phenol	3.0	J	ug/l	4.9	1.9	1
2-Methylphenol	17.		ug/l	4.9	1.0	1
3-Methylphenol/4-Methylphenol	12.		ug/l	4.9	1.1	1
2,4,5-Trichlorophenol	ND		ug/l	4.9	0.71	1
Benzoic Acid	ND		ug/l	49	13.	1
Benzyl Alcohol	ND		ug/l	2.0	0.72	1
Carbazole	69.		ug/l	2.0	0.62	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	71		21-120
Phenol-d6	52		10-120
Nitrobenzene-d5	92		23-120
2-Fluorobiphenyl	106		15-120
2,4,6-Tribromophenol	103		10-120
4-Terphenyl-d14	105		41-149

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

Lab Number: L1736330
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-01 D2
Client ID: MW-N2_100917
Sample Location: NY, NY

Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 10/16/17 10:22
Analyst: KL

Date Collected: 10/09/17 09:00
Date Received: 10/09/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/12/17 01:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	1800		ug/l	4.0	1.7	40

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-01 D
Client ID: MW-N2_100917
Sample Location: NY, NY

Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 10/14/17 18:48
Analyst: DV

Date Collected: 10/09/17 09:00
Date Received: 10/09/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/12/17 01:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	70		ug/l	0.99	0.35	10
2-Chloronaphthalene	ND		ug/l	2.0	0.35	10
Fluoranthene	18		ug/l	0.99	0.38	10
Hexachlorobutadiene	ND		ug/l	4.9	0.36	10
Naphthalene	1300	E	ug/l	0.99	0.42	10
Benzo(a)anthracene	4.7		ug/l	0.99	0.18	10
Benzo(a)pyrene	4.2		ug/l	0.99	0.38	10
Benzo(b)fluoranthene	4.6		ug/l	0.99	0.16	10
Benzo(k)fluoranthene	1.8		ug/l	0.99	0.42	10
Chrysene	3.0		ug/l	0.99	0.38	10
Acenaphthylene	3.2		ug/l	0.99	0.35	10
Anthracene	8.3		ug/l	0.99	0.35	10
Benzo(ghi)perylene	2.5		ug/l	0.99	0.42	10
Fluorene	33		ug/l	0.99	0.37	10
Phenanthrene	47		ug/l	0.99	0.15	10
Dibenzo(a,h)anthracene	1.0		ug/l	0.99	0.38	10
Indeno(1,2,3-cd)pyrene	3.1		ug/l	0.99	0.40	10
Pyrene	14		ug/l	0.99	0.40	10
2-Methylnaphthalene	49		ug/l	0.99	0.44	10
Pentachlorophenol	ND		ug/l	7.9	2.2	10
Hexachlorobenzene	ND		ug/l	7.9	0.32	10
Hexachloroethane	ND		ug/l	7.9	0.30	10

Project Name: RIVER PLACE I + II **Lab Number:** L1736330

Project Number: 170040901 **Report Date:** 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-01 D Date Collected: 10/09/17 09:00

Client ID: MW-N2_100917 Date Received: 10/09/17

Sample Location: NY, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		21-120
Phenol-d6	51		10-120
Nitrobenzene-d5	101		23-120
2-Fluorobiphenyl	95		15-120
2,4,6-Tribromophenol	**123**	Q	10-120
4-Terphenyl-d14	97		41-149

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-02
Client ID: MW-S2_100917
Sample Location: NY, NY

Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 10/13/17 17:20
Analyst: CB

Date Collected: 10/09/17 10:30
Date Received: 10/09/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/12/17 00:49

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	4.8	0.64	1
Bis(2-chloroethyl)ether	ND		ug/l	1.9	0.65	1
1,2-Dichlorobenzene	ND		ug/l	1.9	0.71	1
1,3-Dichlorobenzene	ND		ug/l	1.9	0.67	1
1,4-Dichlorobenzene	ND		ug/l	1.9	0.69	1
3,3'-Dichlorobenzidine	ND		ug/l	4.8	1.3	1
2,4-Dinitrotoluene	ND		ug/l	4.8	0.82	1
2,6-Dinitrotoluene	ND		ug/l	4.8	1.1	1
4-Chlorophenyl phenyl ether	ND		ug/l	1.9	0.60	1
4-Bromophenyl phenyl ether	ND		ug/l	1.9	0.71	1
Bis(2-chloroisopropyl)ether	ND		ug/l	1.9	0.67	1
Bis(2-chloroethoxy)methane	ND		ug/l	4.8	0.61	1
Hexachlorocyclopentadiene	ND		ug/l	19	7.6	1
Isophorone	ND		ug/l	4.8	0.58	1
Nitrobenzene	ND		ug/l	1.9	0.73	1
NDPA/DPA	ND		ug/l	1.9	0.62	1
n-Nitrosodi-n-propylamine	ND		ug/l	4.8	0.68	1
Bis(2-ethylhexyl)phthalate	2.9		ug/l	2.9	0.88	1
Butyl benzyl phthalate	ND		ug/l	4.8	1.2	1
Di-n-butylphthalate	ND		ug/l	4.8	0.67	1
Di-n-octylphthalate	ND		ug/l	4.8	1.1	1
Diethyl phthalate	ND		ug/l	4.8	0.61	1
Dimethyl phthalate	ND		ug/l	4.8	0.63	1
Biphenyl	ND		ug/l	1.9	0.73	1
4-Chloroaniline	ND		ug/l	4.8	0.61	1
2-Nitroaniline	ND		ug/l	4.8	1.1	1
3-Nitroaniline	ND		ug/l	4.8	1.2	1
4-Nitroaniline	ND		ug/l	4.8	1.3	1
Dibenzofuran	4.6		ug/l	1.9	0.64	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	9.7	0.65	1

Project Name: RIVER PLACE I + II
Lab Number: L1736330
Project Number: 170040901
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-02
Client ID: MW-S2_100917
Sample Location: NY, NY
Date Collected: 10/09/17 10:30
Date Received: 10/09/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acetophenone	ND		ug/l	4.8	0.82	1
2,4,6-Trichlorophenol	ND		ug/l	4.8	0.66	1
p-Chloro-m-cresol	ND		ug/l	1.9	0.60	1
2-Chlorophenol	ND		ug/l	1.9	0.61	1
2,4-Dichlorophenol	ND		ug/l	4.8	0.74	1
2,4-Dimethylphenol	ND		ug/l	4.8	1.6	1
2-Nitrophenol	ND		ug/l	9.7	1.5	1
4-Nitrophenol	ND		ug/l	9.7	1.7	1
2,4-Dinitrophenol	ND		ug/l	19	5.3	1
4,6-Dinitro-o-cresol	ND		ug/l	9.7	2.0	1
Phenol	ND		ug/l	4.8	1.8	1
2-Methylphenol	ND		ug/l	4.8	0.99	1
3-Methylphenol/4-Methylphenol	ND		ug/l	4.8	1.1	1
2,4,5-Trichlorophenol	ND		ug/l	4.8	0.69	1
Benzoic Acid	ND		ug/l	48	12.	1
Benzyl Alcohol	ND		ug/l	1.9	0.70	1
Carbazole	9.5		ug/l	1.9	0.61	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		21-120
Phenol-d6	45		10-120
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	89		15-120
2,4,6-Tribromophenol	88		10-120
4-Terphenyl-d14	87		41-149

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-02
Client ID: MW-S2_100917
Sample Location: NY, NY

Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 10/13/17 11:09
Analyst: DV

Date Collected: 10/09/17 10:30
Date Received: 10/09/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/12/17 01:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	9.9		ug/l	0.10	0.03	1
2-Chloronaphthalene	ND		ug/l	0.19	0.03	1
Fluoranthene	2.0		ug/l	0.10	0.04	1
Hexachlorobutadiene	ND		ug/l	0.48	0.04	1
Naphthalene	10		ug/l	0.10	0.04	1
Benzo(a)anthracene	0.46		ug/l	0.10	0.02	1
Benzo(a)pyrene	0.40		ug/l	0.10	0.04	1
Benzo(b)fluoranthene	0.28		ug/l	0.10	0.02	1
Benzo(k)fluoranthene	0.09	J	ug/l	0.10	0.04	1
Chrysene	0.38		ug/l	0.10	0.04	1
Acenaphthylene	1.7		ug/l	0.10	0.03	1
Anthracene	0.89		ug/l	0.10	0.03	1
Benzo(ghi)perylene	0.26		ug/l	0.10	0.04	1
Fluorene	2.1		ug/l	0.10	0.04	1
Phenanthrene	0.51		ug/l	0.10	0.01	1
Dibenzo(a,h)anthracene	0.08	J	ug/l	0.10	0.04	1
Indeno(1,2,3-cd)pyrene	0.26		ug/l	0.10	0.04	1
Pyrene	2.6		ug/l	0.10	0.04	1
2-Methylnaphthalene	0.16		ug/l	0.10	0.04	1
Pentachlorophenol	ND		ug/l	0.78	0.21	1
Hexachlorobenzene	ND		ug/l	0.78	0.03	1
Hexachloroethane	ND		ug/l	0.78	0.03	1

Project Name: RIVER PLACE I + II
Lab Number: L1736330
Project Number: 170040901
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-02
Client ID: MW-S2_100917
Sample Location: NY, NY
Date Collected: 10/09/17 10:30
Date Received: 10/09/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		21-120
Phenol-d6	46		10-120
Nitrobenzene-d5	91		23-120
2-Fluorobiphenyl	81		15-120
2,4,6-Tribromophenol	112		10-120
4-Terphenyl-d14	78		41-149

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

Lab Number: L1736330
Report Date: 10/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/12/17 12:35
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 10/11/17 19:25

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1051344-1					
Acenaphthene	ND		ug/l	2.0	0.59
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.66
Hexachlorobenzene	ND		ug/l	2.0	0.58
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.67
2-Chloronaphthalene	ND		ug/l	2.0	0.64
1,2-Dichlorobenzene	ND		ug/l	2.0	0.73
1,3-Dichlorobenzene	ND		ug/l	2.0	0.69
1,4-Dichlorobenzene	ND		ug/l	2.0	0.71
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.4
2,4-Dinitrotoluene	ND		ug/l	5.0	0.84
2,6-Dinitrotoluene	ND		ug/l	5.0	1.1
Fluoranthene	ND		ug/l	2.0	0.57
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.62
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.73
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.70
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.63
Hexachlorobutadiene	ND		ug/l	2.0	0.72
Hexachlorocyclopentadiene	ND		ug/l	20	7.8
Hexachloroethane	ND		ug/l	2.0	0.68
Isophorone	ND		ug/l	5.0	0.60
Naphthalene	ND		ug/l	2.0	0.68
Nitrobenzene	ND		ug/l	2.0	0.75
NDPA/DPA	ND		ug/l	2.0	0.64
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.70
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.91
Butyl benzyl phthalate	ND		ug/l	5.0	1.3
Di-n-butylphthalate	ND		ug/l	5.0	0.69
Di-n-octylphthalate	ND		ug/l	5.0	1.1
Diethyl phthalate	ND		ug/l	5.0	0.63

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

Lab Number: L1736330
Report Date: 10/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/12/17 12:35
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 10/11/17 19:25

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1051344-1					
Dimethyl phthalate	ND		ug/l	5.0	0.65
Benzo(a)anthracene	ND		ug/l	2.0	0.61
Benzo(a)pyrene	ND		ug/l	2.0	0.54
Benzo(b)fluoranthene	ND		ug/l	2.0	0.64
Benzo(k)fluoranthene	ND		ug/l	2.0	0.60
Chrysene	ND		ug/l	2.0	0.54
Acenaphthylene	ND		ug/l	2.0	0.66
Anthracene	ND		ug/l	2.0	0.64
Benzo(ghi)perylene	ND		ug/l	2.0	0.61
Fluorene	ND		ug/l	2.0	0.62
Phenanthrene	ND		ug/l	2.0	0.61
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.55
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.71
Pyrene	ND		ug/l	2.0	0.57
Biphenyl	ND		ug/l	2.0	0.76
4-Chloroaniline	ND		ug/l	5.0	0.63
2-Nitroaniline	ND		ug/l	5.0	1.1
3-Nitroaniline	ND		ug/l	5.0	1.2
4-Nitroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.66
2-Methylnaphthalene	ND		ug/l	2.0	0.72
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.67
Acetophenone	ND		ug/l	5.0	0.85
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.68
p-Chloro-m-cresol	ND		ug/l	2.0	0.62
2-Chlorophenol	ND		ug/l	2.0	0.63
2,4-Dichlorophenol	ND		ug/l	5.0	0.77
2,4-Dimethylphenol	ND		ug/l	5.0	1.6
2-Nitrophenol	ND		ug/l	10	1.5

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

Lab Number: L1736330
Report Date: 10/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/12/17 12:35
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 10/11/17 19:25

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1051344-1					
4-Nitrophenol	ND		ug/l	10	1.8
2,4-Dinitrophenol	ND		ug/l	20	5.5
4,6-Dinitro-o-cresol	ND		ug/l	10	2.1
Pentachlorophenol	ND		ug/l	10	3.4
Phenol	ND		ug/l	5.0	1.9
2-Methylphenol	ND		ug/l	5.0	1.0
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.72
Benzoic Acid	ND		ug/l	50	13.
Benzyl Alcohol	ND		ug/l	2.0	0.72
Carbazole	ND		ug/l	2.0	0.63
Tentatively Identified Compounds					
Total TIC Compounds	8.79	J	ug/l		
Unknown	8.79	J	ug/l		

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		21-120
Phenol-d6	33		10-120
Nitrobenzene-d5	68		23-120
2-Fluorobiphenyl	72		15-120
2,4,6-Tribromophenol	66		10-120
4-Terphenyl-d14	79		41-149

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

Lab Number: L1736330
Report Date: 10/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 10/12/17 08:35
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 10/11/17 19:25

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1051346-1					
Acenaphthene	ND		ug/l	0.10	0.04
2-Chloronaphthalene	ND		ug/l	0.20	0.04
Fluoranthene	ND		ug/l	0.10	0.04
Hexachlorobutadiene	ND		ug/l	0.50	0.04
Naphthalene	ND		ug/l	0.10	0.04
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.04
Benzo(b)fluoranthene	ND		ug/l	0.10	0.02
Benzo(k)fluoranthene	ND		ug/l	0.10	0.04
Chrysene	ND		ug/l	0.10	0.04
Acenaphthylene	ND		ug/l	0.10	0.04
Anthracene	ND		ug/l	0.10	0.04
Benzo(ghi)perylene	ND		ug/l	0.10	0.04
Fluorene	ND		ug/l	0.10	0.04
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.04
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.04
Pyrene	ND		ug/l	0.10	0.04
2-Methylnaphthalene	ND		ug/l	0.10	0.05
Pentachlorophenol	ND		ug/l	0.80	0.22
Hexachlorobenzene	ND		ug/l	0.80	0.03
Hexachloroethane	ND		ug/l	0.80	0.03

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

Lab Number: L1736330
Report Date: 10/16/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 10/12/17 08:35
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 10/11/17 19:25

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1051346-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		21-120
Phenol-d6	26		10-120
Nitrobenzene-d5	59		23-120
2-Fluorobiphenyl	54		15-120
2,4,6-Tribromophenol	64		10-120
4-Terphenyl-d14	53		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1736330

Report Date: 10/16/17

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: WG1051344-2 WG1051344-3								
Acenaphthene	82		66		37-111	22		30
1,2,4-Trichlorobenzene	69		57		39-98	19		30
Hexachlorobenzene	80		64		40-140	22		30
Bis(2-chloroethyl)ether	87		72		40-140	19		30
2-Chloronaphthalene	82		64		40-140	25		30
1,2-Dichlorobenzene	69		56		40-140	21		30
1,3-Dichlorobenzene	67		56		40-140	18		30
1,4-Dichlorobenzene	67		56		36-97	18		30
3,3'-Dichlorobenzidine	65		55		40-140	17		30
2,4-Dinitrotoluene	91		73		48-143	22		30
2,6-Dinitrotoluene	95		74		40-140	25		30
Fluoranthene	90		72		40-140	22		30
4-Chlorophenyl phenyl ether	84		67		40-140	23		30
4-Bromophenyl phenyl ether	84		66		40-140	24		30
Bis(2-chloroisopropyl)ether	86		71		40-140	19		30
Bis(2-chloroethoxy)methane	91		72		40-140	23		30
Hexachlorobutadiene	59		50		40-140	17		30
Hexachlorocyclopentadiene	79		68		40-140	15		30
Hexachloroethane	60		50		40-140	18		30
Isophorone	90		72		40-140	22		30
Naphthalene	76		62		40-140	20		30
Nitrobenzene	85		69		40-140	21		30
NDPA/DPA	90		72		40-140	22		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

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: WG1051344-2 WG1051344-3								
n-Nitrosodi-n-propylamine	88		71		29-132	21		30
Bis(2-ethylhexyl)phthalate	94		76		40-140	21		30
Butyl benzyl phthalate	92		74		40-140	22		30
Di-n-butylphthalate	92		74		40-140	22		30
Di-n-octylphthalate	94		76		40-140	21		30
Diethyl phthalate	87		71		40-140	20		30
Dimethyl phthalate	93		73		40-140	24		30
Benzo(a)anthracene	91		72		40-140	23		30
Benzo(a)pyrene	91		72		40-140	23		30
Benzo(b)fluoranthene	89		72		40-140	21		30
Benzo(k)fluoranthene	92		74		40-140	22		30
Chrysene	91		73		40-140	22		30
Acenaphthylene	88		70		45-123	23		30
Anthracene	92		74		40-140	22		30
Benzo(ghi)perylene	86		70		40-140	21		30
Fluorene	87		69		40-140	23		30
Phenanthrene	88		70		40-140	23		30
Dibenzo(a,h)anthracene	86		69		40-140	22		30
Indeno(1,2,3-cd)pyrene	86		69		40-140	22		30
Pyrene	90		73		26-127	21		30
Biphenyl	89		71		40-140	23		30
4-Chloroaniline	71		60		40-140	17		30
2-Nitroaniline	93		73		52-143	24		30

Lab Control Sample Analysis
Batch Quality Control

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

Lab Number: L1736330
Report Date: 10/16/17

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: WG1051344-2 WG1051344-3								
3-Nitroaniline	76		62		25-145	20		30
4-Nitroaniline	88		69		51-143	24		30
Dibenzofuran	85		67		40-140	24		30
2-Methylnaphthalene	78		63		40-140	21		30
1,2,4,5-Tetrachlorobenzene	78		63		2-134	21		30
Acetophenone	96		78		39-129	21		30
2,4,6-Trichlorophenol	93		73		30-130	24		30
p-Chloro-m-cresol	92		73		23-97	23		30
2-Chlorophenol	87		71		27-123	20		30
2,4-Dichlorophenol	92		74		30-130	22		30
2,4-Dimethylphenol	102		80		30-130	24		30
2-Nitrophenol	89		72		30-130	21		30
4-Nitrophenol	55		44		10-80	22		30
2,4-Dinitrophenol	82		68		20-130	19		30
4,6-Dinitro-o-cresol	90		73		20-164	21		30
Pentachlorophenol	94		76		9-103	21		30
Phenol	50		42		12-110	17		30
2-Methylphenol	84		67		30-130	23		30
3-Methylphenol/4-Methylphenol	82		65		30-130	23		30
2,4,5-Trichlorophenol	91		72		30-130	23		30
Benzoic Acid	29		27		10-164	7		30
Benzyl Alcohol	77		64		26-116	18		30
Carbazole	90		73		55-144	21		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1736330

Report Date: 10/16/17

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: WG1051344-2 WG1051344-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	64		53		21-120
Phenol-d6	42		34		10-120
Nitrobenzene-d5	83		67		23-120
2-Fluorobiphenyl	87		70		15-120
2,4,6-Tribromophenol	79		64		10-120
4-Terphenyl-d14	85		70		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1736330

Report Date: 10/16/17

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: WG1051346-2 WG1051346-3								
Acenaphthene	49		49		37-111	0		40
2-Chloronaphthalene	54		54		40-140	0		40
Fluoranthene	56		55		40-140	2		40
Hexachlorobutadiene	43		45		40-140	5		40
Naphthalene	50		51		40-140	2		40
Benzo(a)anthracene	54		52		40-140	4		40
Benzo(a)pyrene	49		47		40-140	4		40
Benzo(b)fluoranthene	54		51		40-140	6		40
Benzo(k)fluoranthene	53		50		40-140	6		40
Chrysene	48		46		40-140	4		40
Acenaphthylene	61		61		40-140	0		40
Anthracene	54		53		40-140	2		40
Benzo(ghi)perylene	52		50		40-140	4		40
Fluorene	54		52		40-140	4		40
Phenanthrene	49		47		40-140	4		40
Dibenzo(a,h)anthracene	50		48		40-140	4		40
Indeno(1,2,3-cd)pyrene	49		46		40-140	6		40
Pyrene	56		54		26-127	4		40
2-Methylnaphthalene	53		54		40-140	2		40
Pentachlorophenol	50		51		9-103	2		40
Hexachlorobenzene	47		45		40-140	4		40
Hexachloroethane	44		47		40-140	7		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1736330

Report Date: 10/16/17

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: WG1051346-2 WG1051346-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	39		36		21-120
Phenol-d6	29		27		10-120
Nitrobenzene-d5	65		62		23-120
2-Fluorobiphenyl	58		55		15-120
2,4,6-Tribromophenol	73		69		10-120
4-Terphenyl-d14	59		55		41-149

METALS

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-01
Client ID: MW-N2_100917
Sample Location: NY, NY
Matrix: Water
Date Collected: 10/09/17 09:00
Date Received: 10/09/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.0187		mg/l	0.0100	0.00327	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Antimony, Total	0.00061	J	mg/l	0.00400	0.00042	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Arsenic, Total	0.00184		mg/l	0.00050	0.00016	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Barium, Total	0.2800		mg/l	0.00050	0.00017	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Calcium, Total	217.		mg/l	0.100	0.0394	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Chromium, Total	0.00122		mg/l	0.00100	0.00017	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Cobalt, Total	0.00498		mg/l	0.00050	0.00016	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Copper, Total	0.00171		mg/l	0.00100	0.00038	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Iron, Total	1.75		mg/l	0.0500	0.0191	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Lead, Total	0.00053	J	mg/l	0.00100	0.00034	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Magnesium, Total	48.2		mg/l	0.0700	0.0242	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Manganese, Total	0.4159		mg/l	0.00100	0.00044	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Mercury, Total	0.00007	J	mg/l	0.00020	0.00006	1	10/12/17 12:17	10/12/17 14:11	EPA 7470A	1,7470A	MG
Nickel, Total	0.00652		mg/l	0.00200	0.00055	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Potassium, Total	32.0		mg/l	0.100	0.0309	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Selenium, Total	ND		mg/l	0.00500	0.00173	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Silver, Total	ND		mg/l	0.00040	0.00016	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Sodium, Total	162.		mg/l	0.100	0.0293	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Thallium, Total	ND		mg/l	0.00050	0.00014	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Vanadium, Total	0.00165	J	mg/l	0.00500	0.00157	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT
Zinc, Total	0.01723		mg/l	0.01000	0.00341	1	10/12/17 13:00	10/16/17 15:49	EPA 3005A	1,6020A	TT

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-02
Client ID: MW-S2_100917
Sample Location: NY, NY
Matrix: Water
Date Collected: 10/09/17 10:30
Date Received: 10/09/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.557		mg/l	0.0100	0.00327	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Antimony, Total	ND		mg/l	0.00400	0.00042	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Arsenic, Total	0.00850		mg/l	0.00050	0.00016	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Barium, Total	0.2238		mg/l	0.00050	0.00017	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Calcium, Total	177.		mg/l	0.100	0.0394	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Chromium, Total	0.00261		mg/l	0.00100	0.00017	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Cobalt, Total	0.00264		mg/l	0.00050	0.00016	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Copper, Total	0.00254		mg/l	0.00100	0.00038	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Iron, Total	12.8		mg/l	0.0500	0.0191	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Lead, Total	0.01668		mg/l	0.00100	0.00034	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Magnesium, Total	69.5		mg/l	0.0700	0.0242	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Manganese, Total	0.3893		mg/l	0.00100	0.00044	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Mercury, Total	0.00019	J	mg/l	0.00020	0.00006	1	10/12/17 12:17	10/12/17 14:13	EPA 7470A	1,7470A	MG
Nickel, Total	0.00283		mg/l	0.00200	0.00055	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Potassium, Total	21.9		mg/l	0.100	0.0309	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Selenium, Total	ND		mg/l	0.00500	0.00173	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Silver, Total	ND		mg/l	0.00040	0.00016	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Sodium, Total	60.9		mg/l	0.100	0.0293	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Thallium, Total	ND		mg/l	0.00050	0.00014	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Vanadium, Total	0.00364	J	mg/l	0.00500	0.00157	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT
Zinc, Total	0.00884	J	mg/l	0.01000	0.00341	1	10/12/17 13:00	10/16/17 15:53	EPA 3005A	1,6020A	TT

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1051171-1										
Mercury, Total	ND		mg/l	0.00020	0.00006	1	10/12/17 12:17	10/12/17 13:31	1,7470A	MG

Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1051612-1										
Aluminum, Total	ND		mg/l	0.0100	0.00327	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Antimony, Total	ND		mg/l	0.00400	0.00042	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Arsenic, Total	ND		mg/l	0.00050	0.00016	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Barium, Total	ND		mg/l	0.00050	0.00017	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Calcium, Total	0.0413	J	mg/l	0.100	0.0394	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Chromium, Total	ND		mg/l	0.00100	0.00017	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Copper, Total	ND		mg/l	0.00100	0.00038	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Iron, Total	ND		mg/l	0.0500	0.0191	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Lead, Total	ND		mg/l	0.00100	0.00034	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Manganese, Total	ND		mg/l	0.00100	0.00044	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Nickel, Total	ND		mg/l	0.00200	0.00055	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Potassium, Total	ND		mg/l	0.100	0.0309	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Selenium, Total	ND		mg/l	0.00500	0.00173	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Silver, Total	ND		mg/l	0.00040	0.00016	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Sodium, Total	0.0357	J	mg/l	0.100	0.0293	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Thallium, Total	ND		mg/l	0.00050	0.00014	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT
Zinc, Total	ND		mg/l	0.01000	0.00341	1	10/12/17 13:00	10/16/17 14:58	1,6020A	TT

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

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: L1736330

Report Date: 10/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1051171-2								
Mercury, Total	106		-		80-120	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1736330

Report Date: 10/16/17

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1051612-2					
Aluminum, Total	110	-	80-120	-	
Antimony, Total	92	-	80-120	-	
Arsenic, Total	100	-	80-120	-	
Barium, Total	99	-	80-120	-	
Beryllium, Total	100	-	80-120	-	
Cadmium, Total	105	-	80-120	-	
Calcium, Total	116	-	80-120	-	
Chromium, Total	107	-	80-120	-	
Cobalt, Total	104	-	80-120	-	
Copper, Total	104	-	80-120	-	
Iron, Total	120	-	80-120	-	
Lead, Total	96	-	80-120	-	
Magnesium, Total	108	-	80-120	-	
Manganese, Total	106	-	80-120	-	
Nickel, Total	106	-	80-120	-	
Potassium, Total	107	-	80-120	-	
Selenium, Total	102	-	80-120	-	
Silver, Total	98	-	80-120	-	
Sodium, Total	104	-	80-120	-	
Thallium, Total	88	-	80-120	-	
Vanadium, Total	105	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1736330

Report Date: 10/16/17

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1051612-2					
Zinc, Total	104	-	80-120	-	

Matrix Spike Analysis
Batch Quality Control

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

Lab Number: L1736330
Report Date: 10/16/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1051171-3 QC Sample: L1736356-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00475	95		-	-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

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

Lab Number: L1736330
Report Date: 10/16/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1051612-3 QC Sample: L1735916-01 Client ID: MS Sample										
Aluminum, Total	0.644	2	3.07	121		-	-	75-125	-	20
Antimony, Total	0.0007J	0.5	0.5066	101		-	-	75-125	-	20
Arsenic, Total	0.0012	0.12	0.1240	102		-	-	75-125	-	20
Barium, Total	1.669	2	3.669	100		-	-	75-125	-	20
Beryllium, Total	ND	0.05	0.05149	103		-	-	75-125	-	20
Cadmium, Total	0.0006	0.051	0.05553	108		-	-	75-125	-	20
Calcium, Total	90.4	10	98.0	76		-	-	75-125	-	20
Chromium, Total	0.003	0.2	0.2196	108		-	-	75-125	-	20
Cobalt, Total	0.0006	0.5	0.5450	109		-	-	75-125	-	20
Copper, Total	0.2365	0.25	0.5116	110		-	-	75-125	-	20
Iron, Total	1.44	1	2.41	97		-	-	75-125	-	20
Lead, Total	0.0059	0.51	0.4907	95		-	-	75-125	-	20
Magnesium, Total	17.9	10	28.8	109		-	-	75-125	-	20
Manganese, Total	0.3477	0.5	0.8895	108		-	-	75-125	-	20
Nickel, Total	0.0189	0.5	0.5477	106		-	-	75-125	-	20
Potassium, Total	31.4	10	40.3	89		-	-	75-125	-	20
Selenium, Total	ND	0.12	0.115	96		-	-	75-125	-	20
Silver, Total	0.0002J	0.05	0.05018	100		-	-	75-125	-	20
Sodium, Total	86.1	10	92.8	**67**	Q	-	-	75-125	-	20
Thallium, Total	ND	0.12	0.1041	87		-	-	75-125	-	20
Vanadium, Total	ND	0.5	0.5488	110		-	-	75-125	-	20

Matrix Spike Analysis
Batch Quality Control

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

Lab Number: L1736330
Report Date: 10/16/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1051612-3 QC Sample: L1735916-01 Client ID: MS Sample									
Zinc, Total	0.5959	0.5	1.109	103	-	-	75-125	-	20

Lab Duplicate Analysis
Batch Quality Control

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

Lab Number: L1736330
Report Date: 10/16/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1051171-4 QC Sample: L1736356-01 Client ID: DUP Sample						
Mercury, Total	ND	0.00006J	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

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

Lab Number: L1736330
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-01
Client ID: MW-N2_100917
Sample Location: NY, NY
Matrix: Water

Date Collected: 10/09/17 09:00
Date Received: 10/09/17
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	0.820		mg/l	0.010	0.003	2	10/11/17 13:05	10/11/17 16:40	1,9010C/9012B	LH
Cyanide, Physiologically Available	0.120		mg/l	0.005	0.002	1	10/11/17 11:30	10/11/17 15:06	64,9014(M)	LH

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

Lab Number: L1736330
Report Date: 10/16/17

SAMPLE RESULTS

Lab ID: L1736330-02
Client ID: MW-S2_100917
Sample Location: NY, NY
Matrix: Water

Date Collected: 10/09/17 10:30
Date Received: 10/09/17
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	0.598		mg/l	0.010	0.003	2	10/11/17 13:05	10/11/17 16:41	1,9010C/9012B	LH
Cyanide, Physiologically Available	0.212		mg/l	0.005	0.002	1	10/11/17 11:30	10/11/17 15:26	64,9014(M)	LH

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1736330
Report Date: 10/16/17

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: WG1050680-1										
Cyanide, Physiologically Available	ND		mg/l	0.005	0.002	1	10/11/17 11:30	10/11/17 14:57	64,9014(M)	LH
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1051172-1										
Cyanide, Total	ND		mg/l	0.005	0.001	1	10/11/17 13:05	10/11/17 16:08	1,9010C/9012B	LH

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1736330

Report Date: 10/16/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1050680-2								
Cyanide, Physiologically Available	99		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1050680-3								
Cyanide, Physiologically Available	**7**		-		0-10	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1051172-2 WG1051172-3								
Cyanide, Total	100		89		85-115	12		20

Matrix Spike Analysis
Batch Quality Control

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

Lab Number: L1736330
Report Date: 10/16/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1050680-5 QC Sample: L1736330-02 Client ID: MW-S2_100917												
Cyanide, Physiologically Available	0.212	0.2	0.532	**160**	Q	-	-		75-125	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1051172-4 WG1051172-5 QC Sample: L1736535-01 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.198	99		0.205	102		80-120	3		20

Lab Duplicate Analysis
Batch Quality Control

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

Lab Number: L1736330
Report Date: 10/16/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1050680-4 QC Sample: L1736330-01 Client ID: MW-N2_100917						
Cyanide, Physiologically Available	0.120	0.065	mg/l	**59**	Q	20

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

Lab Number: L1736330
Report Date: 10/16/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1736330-01A	Vial HCl preserved	A	NA		4.9	Y	Absent		NYTCL-8260(14)
L1736330-01B	Vial HCl preserved	A	NA		4.9	Y	Absent		NYTCL-8260(14)
L1736330-01C	Vial HCl preserved	A	NA		4.9	Y	Absent		NYTCL-8260(14)
L1736330-01D	Plastic 250ml HNO3 preserved	A	<2	<2	4.9	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)
L1736330-01E	Plastic 250ml NaOH preserved	A	>12	>12	4.9	Y	Absent		TCN-9010(14),PACN(14)
L1736330-01F	Plastic 250ml NaOH preserved	A	>12	>12	4.9	Y	Absent		TCN-9010(14),PACN(14)
L1736330-01G	Amber 1000ml unpreserved	A	7	7	4.9	Y	Absent		NYTCL-8270(7),NYTCL-8270-SIM(7)
L1736330-01H	Amber 1000ml unpreserved	A	7	7	4.9	Y	Absent		NYTCL-8270(7),NYTCL-8270-SIM(7)
L1736330-02A	Vial HCl preserved	A	NA		4.9	Y	Absent		NYTCL-8260(14)
L1736330-02B	Vial HCl preserved	A	NA		4.9	Y	Absent		NYTCL-8260(14)
L1736330-02C	Vial HCl preserved	A	NA		4.9	Y	Absent		NYTCL-8260(14)
L1736330-02D	Plastic 250ml HNO3 preserved	A	<2	<2	4.9	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)
L1736330-02E	Plastic 250ml NaOH preserved	A	>12	>12	4.9	Y	Absent		TCN-9010(14),PACN(14)
L1736330-02F	Plastic 250ml NaOH preserved	A	>12	>12	4.9	Y	Absent		TCN-9010(14),PACN(14)
L1736330-02G	Amber 1000ml unpreserved	A	7	7	4.9	Y	Absent		NYTCL-8270(7),NYTCL-8270-SIM(7)

*Values in parentheses indicate holding time in days

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

Lab Number: L1736330
Report Date: 10/16/17

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1736330-02H	Amber 1000ml unpreserved	A	7	7	4.9	Y	Absent		NYTCL-8270(7),NYTCL-8270-SIM(7)
L1736330-03A	Vial HCl preserved	A	NA		4.9	Y	Absent		NYTCL-8260(14)
L1736330-03B	Vial HCl preserved	A	NA		4.9	Y	Absent		NYTCL-8260(14)
L1736330-03C	Vial HCl preserved	A	NA		4.9	Y	Absent		NYTCL-8260(14)
L1736330-04A	Vial HCl preserved	A	NA		4.9	Y	Absent		NYTCL-8260(14)
L1736330-04B	Vial HCl preserved	A	NA		4.9	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	RIVER PLACE I + II	**Lab Number:**	L1736330
Project Number:	170040901	**Report Date:**	10/16/17

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.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

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.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

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

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

Report Format: DU Report with 'J' Qualifiers

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Data Qualifiers

projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard 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

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Project Number: 170040901
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REFERENCES

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

64 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). August 2004.

LIMITATION OF LIABILITIES

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.

Certification Information

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

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

Drinking Water
EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1** Hg.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

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

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-9288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab:

ALPHA Job #:

Client Information
Client: LANGAN
Address: 360 West 31st St
NY NY 10001
Phone: 212-479-5400
Fax: KVELCOL@Langan.com
Email: NRICE@Langan.com

Project Information
Project Name: River Place I & II
Project Location: NY NY
Project #: 170047001
(Use Project name as Project #)
Project Manager: Kim Velcoi
ALPHAQuote #:

Turn-Around Time
Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☒ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☒ Other PDF + Excel

Regulatory Requirement
☑ NY TOGS ☐ NY Part 375
☑ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☒ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☑ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	SVOCs	TAL Metals	Total Cyanide	Available Cyanide	Total Bottle	Sample Specific Comments
	MW-N2_100917	9/07	10/9/17	GW	JH	X	X	X	X	X		
	MW-S2_100917	1030	↓	GW	↓	X	X	X	X	X		
	ORVM_100917	1100	↓	GW	↓	X						
	TB01_100917	10/9/17				X						

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type
Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
	1250 10/9/17	AAL	10/9/17 1246

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page: 1 of 1

Date Rec'd in Lab: 10/10/17

ALPHA Job #: L1786330

Client Information
Client: LANGAN
Address: 360 West 31st St
NY NY 10001
Phone: 212-479-5400
Fax: KDELCOL@Langan.com
Email: NRFCE@Langan.com

Project Information
Project Name: River Place I & II
Project Location: NY NY
Project #: 170047001
(Use Project name as Project #) ☐
Project Manager: Kim DelCol
ALPHAQuote #:

Turn-Around Time
Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☒ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☒ Other PDF + Excel

Regulatory Requirement
☒ NY TOGS ☐ NY Part 375
☒ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☒ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs	SVOCs	TAL Metals	total cyanide	Available cyanide				Sample Specific Comments	Total Bottle
36330-01	MW-N2_100917	9/09/17	0900	GW	JA										
-02	MW-S1_100917		1030	GW											
-03	DRUM_100917		1100	GW											

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type									
Preservative									

Relinquished By:	Date/Time	Received By:	Date/Time
	1250 10/9/17		10/9/17 1246
	10/9/17 1912		
10/10	0210		10/10/17 0210

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES POTABLE WATER
All approved analytes are listed below:

Drinking Water Bacteriology	
Coliform, Total / E. coli (Qualitative)	SM 18-21 9222B(97)/40CFR141.21(F)6i
	SM 18-21 9223B (97) (Colilert)
Standard Plate Count	SM 18-21 9215B
Drinking Water Metals I	
Arsenic, Total	EPA 200.8 Rev. 5.4
Barium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Cadmium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Chromium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Copper, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Iron, Total	EPA 200.7 Rev. 4.4
Lead, Total	EPA 200.8 Rev. 5.4
Manganese, Total	EPA 200.7 Rev. 4.4
Mercury, Total	EPA 245.1 Rev. 3.0
Selenium, Total	EPA 200.8 Rev. 5.4
Silver, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Zinc, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Drinking Water Metals II	
Aluminum, Total	EPA 200.7 Rev. 4.4
Antimony, Total	EPA 200.8 Rev. 5.4
Beryllium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Nickel, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Thallium, Total	EPA 200.8 Rev. 5.4
Drinking Water Metals III	
Calcium, Total	EPA 200.7 Rev. 4.4
Magnesium, Total	EPA 200.7 Rev. 4.4
Sodium, Total	EPA 200.7 Rev. 4.4
Drinking Water Miscellaneous	
Organic Carbon, Total	SM 18-21 5310C (00)
Perchlorate	EPA 332.0 Rev. 1
Drinking Water Non-Metals	
Alkalinity	SM 18-21 2320B (97)
Calcium Hardness	EPA 200.7 Rev. 4.4
Chloride	EPA 300.0 Rev. 2.1
Color	SM 18-21 2120B (01)
Cyanide	SM 18-21 4500-CN E (99)
Fluoride, Total	EPA 300.0 Rev. 2.1
	SM 18-21 4500-F C (97)
Nitrate (as N)	SM 18-21 4500-NO3 F (00)
Nitrite (as N)	SM 18-21 4500-NO3 F (00)
Solids, Total Dissolved	SM 18-21 2540C (97)
Specific Conductance	SM 18-21 2510B (97)

Serial No.: 48541

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8 WALKUP DR
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ENVIRONMENTAL ANALYSES POTABLE WATER
All approved analytes are listed below:

Drinking Water Non-Metals	
Sulfate (as SO4)	EPA 300.0 Rev. 2.1
Drinking Water Trihalomethanes	
Bromodichloromethane	EPA 524.2
Bromoform	EPA 524.2
Chloroform	EPA 524.2
Dibromochloromethane	EPA 524.2
Total Trihalomethanes	EPA 524.2
Fuel Additives	
Methyl tert-butyl ether	EPA 524.2
Naphthalene	EPA 524.2
Microextractibles	
1,2-Dibromo-3-chloropropane	EPA 504.1
1,2-Dibromoethane	EPA 504.1
Volatile Aromatics	
1,2,3-Trichlorobenzene	EPA 524.2
1,2,4-Trichlorobenzene	EPA 524.2
1,2,4-Trimethylbenzene	EPA 524.2
1,2-Dichlorobenzene	EPA 524.2
1,3,5-Trimethylbenzene	EPA 524.2
1,3-Dichlorobenzene	EPA 524.2
1,4-Dichlorobenzene	EPA 524.2
2-Chlorotoluene	EPA 524.2
4-Chlorotoluene	EPA 524.2
Benzene	EPA 524.2

Volatile Aromatics	
Bromobenzene	EPA 524.2
Chlorobenzene	EPA 524.2
Ethyl benzene	EPA 524.2
Hexachlorobutadiene	EPA 524.2
Isopropylbenzene	EPA 524.2
n-Butylbenzene	EPA 524.2
n-Propylbenzene	EPA 524.2
p-Isopropyltoluene (P-Cymene)	EPA 524.2
sec-Butylbenzene	EPA 524.2
Styrene	EPA 524.2
tert-Butylbenzene	EPA 524.2
Toluene	EPA 524.2
Total Xylenes	EPA 524.2
Volatile Halocarbons	
1,1,1,2-Tetrachloroethane	EPA 524.2
1,1,1-Trichloroethane	EPA 524.2
1,1,2,2-Tetrachloroethane	EPA 524.2
1,1,2-Trichloroethane	EPA 524.2
1,1-Dichloroethane	EPA 524.2
1,1-Dichloroethene	EPA 524.2
1,1-Dichloropropene	EPA 524.2
1,2,3-Trichloropropane	EPA 524.2
1,2-Dichloroethane	EPA 524.2
1,2-Dichloropropane	EPA 524.2
1,3-Dichloropropane	EPA 524.2

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ENVIRONMENTAL ANALYSES POTABLE WATER
All approved analytes are listed below:

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

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All approved analytes are listed below:

Acrylates		**Benzidines**	
Acrolein (Propenal)	EPA 624	Benzidine	EPA 625
	EPA 8260C		EPA 8270D
Acrylonitrile	EPA 624	**Chlorinated Hydrocarbon Pesticides**	
	EPA 8260C	4,4'-DDD	EPA 608
Ethyl methacrylate	EPA 8260C		EPA 8081B
Amines		4,4'-DDE	EPA 608
2-Nitroaniline	EPA 8270D		EPA 8081B
3-Nitroaniline	EPA 8270D	4,4'-DDT	EPA 608
4-Chloroaniline	EPA 8270D		EPA 8081B
4-Nitroaniline	EPA 8270D	Aldrin	EPA 608
Aniline	EPA 8270D		EPA 8081B
Carbazole	EPA 625	alpha-BHC	EPA 608
	EPA 8270D		EPA 8081B
Pyridine	EPA 625	alpha-Chlordane	EPA 8081B
	EPA 8270D	beta-BHC	EPA 608
Bacteriology			EPA 8081B
Coliform, Fecal	SM 18-21 9221E (99)	Chlordane Total	EPA 608
	SM 18-21 9222D (97)		EPA 8081B
Coliform, Total	SM 18-21 9221B (99)	delta-BHC	EPA 608
	SM 18-21 9222B (97)		EPA 8081B
Standard Plate Count	SM 18-21 9215B	Dieldrin	EPA 608
Benzidines			EPA 8081B
3,3'-Dichlorobenzidine	EPA 625	Endosulfan I	EPA 608
	EPA 8270D		EPA 8081B
		Endosulfan II	EPA 608

Serial No.: 48542

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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Issued April 01, 2013

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ALPHA ANALYTICAL
8 WALKUP DR
WESTBOROUGH, MA 01581-1019

NY Lab Id No: 11148

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Chlorinated Hydrocarbon Pesticides	
Endosulfan II	EPA 8081B
Endosulfan sulfate	EPA 608
	EPA 8081B
Endrin	EPA 608
	EPA 8081B
Endrin aldehyde	EPA 608
	EPA 8081B
Endrin Ketone	EPA 8081B
gamma-Chlordane	EPA 8081B
Heptachlor	EPA 608
	EPA 8081B
Heptachlor epoxide	EPA 608
	EPA 8081B
Lindane	EPA 608
	EPA 8081B
Methoxychlor	EPA 608
	EPA 8081B
Toxaphene	EPA 608
	EPA 8081B
Chlorinated Hydrocarbons	
1,2,3-Trichlorobenzene	EPA 8260C
1,2,4,5-Tetrachlorobenzene	EPA 8270D
1,2,4-Trichlorobenzene	EPA 625
	EPA 8270D
2-Chloronaphthalene	EPA 625

Chlorinated Hydrocarbons	
2-Chloronaphthalene	EPA 8270D
Hexachlorobenzene	EPA 625
	EPA 8270D
Hexachlorobutadiene	EPA 625
	EPA 8270D
Hexachlorocyclopentadiene	EPA 625
	EPA 8270D
Hexachloroethane	EPA 625
	EPA 8270D
Chlorophenoxy Acid Pesticides	
2,4,5-T	EPA 8151A
2,4,5-TP (Silvex)	EPA 8151A
2,4-D	EPA 8151A
Dalapon	EPA 8151A
Dinoseb	EPA 8151A
Demand	
Biochemical Oxygen Demand	SM 18-21 5210B (01)
Carbonaceous BOD	SM 18-21 5210B (01)
Chemical Oxygen Demand	EPA 410.4 Rev. 2.0
	SM 18-21 5220D (97)
Fuel Oxygenates	
Di-isopropyl ether	EPA 8260C
Ethanol	EPA 8260C
Methyl tert-butyl ether	EPA 8260C

Serial No.: 48542

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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WESTBOROUGH, MA 01581-1019

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ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Fuel Oxygenates	
tert-amyl methyl ether (TAME)	EPA 8260C
tert-butyl alcohol	EPA 8260C
tert-butyl ethyl ether (ETBE)	EPA 8260C
Haloethers	
4-Bromophenylphenyl ether	EPA 625
	EPA 8270D
4-Chlorophenylphenyl ether	EPA 625
	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 625
	EPA 8270D
Bis(2-chloroethyl)ether	EPA 625
	EPA 8270D
Bis(2-chloroisopropyl) ether	EPA 625
	EPA 8270D
Low Level Polynuclear Aromatics	
Benzo(a)anthracene Low Level	EPA 8270D SIM
Benzo(a)pyrene Low Level	EPA 8270D SIM
Benzo(b)fluoranthene Low Level	EPA 8270D SIM
Benzo(g,h,i)perylene Low Level	EPA 8270D SIM
Benzo(k)fluoranthene Low Level	EPA 8270D SIM
Chrysene Low Level	EPA 8270D SIM
Dibenzo(a,h)anthracene Low Level	EPA 8270D SIM
Fluoranthene Low Level	EPA 8270D SIM
Fluorene Low Level	EPA 8270D SIM
Indeno(1,2,3-cd)pyrene Low Level	EPA 8270D SIM

Low Level Polynuclear Aromatics	
Naphthalene Low Level	EPA 8270D SIM
Mineral	
Acidity	SM 18-21 2310B,4a (97)
Alkalinity	SM 18-21 2320B (97)
Chloride	EPA 300.0 Rev. 2.1
	SM 18-21 4500-Cl- E (97)
Fluoride, Total	EPA 300.0 Rev. 2.1
	SM 18-21 4500-F C (97)
Hardness, Total	EPA 200.7 Rev. 4.4
	SM 18-21 2340B (97)
Sulfate (as SO4)	EPA 300.0 Rev. 2.1
	SM 15 426 C
Nitroaromatics and Isophorone	
1,3,5-Trinitrobenzene	EPA 8330
1,3-Dinitrobenzene	EPA 8270D
	EPA 8330
2,4,6-Trinitrotoluene	EPA 8330
2,4-Dinitrotoluene	EPA 625
	EPA 8270D
	EPA 8330
2,6-Dinitrotoluene	EPA 625
	EPA 8270D
	EPA 8330
2-Amino-4,6-dinitrotoluene	EPA 8330
2-Nitrotoluene	EPA 8330

Serial No.: 48542

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2014
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CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No. 11148

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Nitroaromatics and Isophorone	
3-Nitrotoluene	EPA 8330
4-Amino-2,6-dinitrotoluene	EPA 8330
4-Nitrotoluene	EPA 8330
Hexahydro-1,3,5-trinitro-1,3,5-triazine	EPA 8330
Isophorone	EPA 625
	EPA 8270D
Methyl-2,4,6-trinitrophenylnitramine	EPA 8330
Nitrobenzene	EPA 625
	EPA 8270D
	EPA 8330
Octahydro-tetranitro-tetrazocine	EPA 8330
Nitrosoamines	
N-Nitrosodimethylamine	EPA 625
	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 625
	EPA 8270D
N-Nitrosodiphenylamine	EPA 625
	EPA 8270D
Nutrient	
Ammonia (as N)	EPA 350.1 Rev. 2.0
	SM 18 4500-NH3 H
Kjeldahl Nitrogen, Total	EPA 351.1 Rev. 1978
	LACHAT 10-107-06-2-J
Nitrate (as N)	EPA 300.0 Rev. 2.1
	EPA 353.2 Rev. 2.0

Nutrient	
Nitrate (as N)	SM 18-21 4500-NO3 F (00)
Nitrite (as N)	SM 18-21 4500-NO2 B (00)
Orthophosphate (as P)	SM 18-21 4500-P E
Phosphorus, Total	SM 18-21 4500-P E
Organophosphate Pesticides	
Atrazine	EPA 8270D
Petroleum Hydrocarbons	
Diesel Range Organics	EPA 8015C
Gasoline Range Organics	EPA 8015C
Phthalate Esters	
Benzyl butyl phthalate	EPA 625
	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 625
	EPA 8270D
Diethyl phthalate	EPA 625
	EPA 8270D
Dimethyl phthalate	EPA 625
	EPA 8270D
Di-n-butyl phthalate	EPA 625
	EPA 8270D
Di-n-octyl phthalate	EPA 625
	EPA 8270D
Polychlorinated Biphenyls	
PCB-1016	EPA 608

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Polychlorinated Biphenyls	
PCB-1016	EPA 8082A
PCB-1221	EPA 608 EPA 8082A
PCB-1232	EPA 608 EPA 8082A
PCB-1242	EPA 608 EPA 8082A
PCB-1248	EPA 608 EPA 8082A
PCB-1254	EPA 608 EPA 8082A
PCB-1260	EPA 608 EPA 8082A
PCB-1262	EPA 8082A
PCB-1268	EPA 8082A
Polynuclear Aromatics	
Acenaphthene	EPA 625 EPA 8270D
Acenaphthylene	EPA 625 EPA 8270D
Anthracene	EPA 625 EPA 8270D
Benzo(a)anthracene	EPA 625 EPA 8270D
Benzo(a)pyrene	EPA 625

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

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Priority Pollutant Phenols	
2,4,5-Trichlorophenol	EPA 625
	EPA 8270D
2,4,6-Trichlorophenol	EPA 625
	EPA 8270D
2,4-Dichlorophenol	EPA 625
	EPA 8270D
2,4-Dimethylphenol	EPA 625
	EPA 8270D
2,4-Dinitrophenol	EPA 625
	EPA 8270D
2-Chlorophenol	EPA 625
	EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 625
	EPA 8270D
2-Methylphenol	EPA 625
	EPA 8270D
2-Nitrophenol	EPA 625
	EPA 8270D
3-Methylphenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 625
	EPA 8270D
4-Methylphenol	EPA 8270D
4-Nitrophenol	EPA 625
	EPA 8270D
Pentachlorophenol	EPA 625
	EPA 8270D
Priority Pollutant Phenols	
Phenol	EPA 625
	EPA 8270D
Residue	
Solids, Total	SM 18-21 2540B (97)
Solids, Total Dissolved	SM 18-21 2540C (97)
Solids, Total Suspended	SM 18-21 2540D (97)
Semi-Volatile Organics	
1,1'-Biphenyl	EPA 8270D
1,2-Dichlorobenzene, Semi-volatile	EPA 8270D
1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
Acetophenone	EPA 8270D
Benzaldehyde	EPA 8270D
Benzoic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D
Caprolactam	EPA 8270D
Dibenzofuran	EPA 8270D
Volatile Aromatics	
1,2,4-Trichlorobenzene, Volatile	EPA 8260C
1,2,4-Trimethylbenzene	EPA 8260C
1,2-Dichlorobenzene	EPA 624
	EPA 8260C
1,3,5-Trimethylbenzene	EPA 8260C

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Volatile Aromatics	
1,3-Dichlorobenzene	EPA 624
	EPA 8260C
1,4-Dichlorobenzene	EPA 624
	EPA 8260C
2-Chlorotoluene	EPA 8260C
4-Chlorotoluene	EPA 8260C
Benzene	EPA 624
	EPA 8260C
Chlorobenzene	EPA 624
	EPA 8260C
Ethylbenzene	EPA 624
	EPA 8260C
Isopropylbenzene	EPA 8260C
Naphthalene, Volatile	EPA 8260C
n-Butylbenzene	EPA 8260C
n-Propylbenzene	EPA 8260C
p-Isopropyltoluene (P-Cymene)	EPA 8260C
sec-Butylbenzene	EPA 8260C
Styrene	EPA 624
	EPA 8260C
tert-Butylbenzene	EPA 8260C
Toluene	EPA 624
	EPA 8260C
Total Xylenes	EPA 624
	EPA 8260C

Volatile Halocarbons	
1,1,1,2-Tetrachloroethane	EPA 8260C
1,1,1-Trichloroethane	EPA 624
	EPA 8260C
1,1,2,2-Tetrachloroethane	EPA 624
	EPA 8260C
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 8260C
1,1,2-Trichloroethane	EPA 624
	EPA 8260C
1,1-Dichloroethane	EPA 624
	EPA 8260C
1,1-Dichloroethene	EPA 624
	EPA 8260C
1,1-Dichloropropene	EPA 8260C
1,2,3-Trichloropropane	EPA 8260C
1,2-Dibromo-3-chloropropane	EPA 8011
	EPA 8260C
1,2-Dibromoethane	EPA 8011
	EPA 8260C
1,2-Dichloroethane	EPA 624
	EPA 8260C
1,2-Dichloropropane	EPA 624
	EPA 8260C
1,3-Dichloropropane	EPA 8260C
2,2-Dichloropropane	EPA 8260C
2-Chloroethyl vinyl ether	EPA 624
	EPA 8260C

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

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Volatiles Organics

Vinyl acetate	EPA 8260C

Wastewater Metals I

Barium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A
Cadmium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A
Calcium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
Chromium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A
Copper, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A
Iron, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
	EPA 6020A
Lead, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4

Wastewater Metals I

Lead, Total	EPA 6010C
	EPA 6020A
Magnesium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
Manganese, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A
Nickel, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A
Potassium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
Silver, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A
Sodium, Total	EPA 200.7 Rev. 4.4
	EPA 6010C

Wastewater Metals II

Aluminum, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A

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Wastewater Metals II	
Antimony, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A
Arsenic, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A
Beryllium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A
Chromium VI	EPA 7196A
	SM 18-19 3500-Cr D
Mercury, Total	EPA 245.1 Rev. 3.0
	EPA 7470A
Selenium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A
Vanadium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A
Zinc, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4

Wastewater Metals II	
Zinc, Total	EPA 6010C
	EPA 6020A
Wastewater Metals III	
Cobalt, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A
Molybdenum, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A
Thallium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010C
	EPA 6020A
Tin, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
Titanium, Total	EPA 200.7 Rev. 4.4
Wastewater Miscellaneous	
Boron, Total	EPA 200.7 Rev. 4.4
	EPA 6010C
Bromide	EPA 300.0 Rev. 2.1
Color	SM 18-21 2120B (01)
Cyanide, Total	SM 18-21 4500-CN E (99)
Formaldehyde	EPA 8315A

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Wastewater Miscellaneous

Oil and Grease Total Recoverable (HEM	EPA 1664A
Organic Carbon, Total	SM 18-21 5310C (00)
Phenols	EPA 420.1 Rev. 1978
	SM 14 510C
Silica, Dissolved	EPA 200.7 Rev. 4.4
Specific Conductance	EPA 120.1 Rev. 1982
	SM 18-21 2510B (97)
Sulfide (as S)	SM 18-21 4500-S D (00)
Surfactant (MBAS)	SM 18-21 5540C (00)
Total Petroleum Hydrocarbons	EPA 1664A

Sample Preparation Methods

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

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below

Acrylates	
Acrolein (Propenal)	EPA 8260C
Acrylonitrile	EPA 8260C
Ethyl methacrylate	EPA 8260C
Amines	
1,2-Diphenylhydrazine	EPA 8270D
2-Nitroaniline	EPA 8270D
3-Nitroaniline	EPA 8270D
4-Chloroaniline	EPA 8270D
4-Nitroaniline	EPA 8270D
Aniline	EPA 8270D
Carbazole	EPA 8270D
Benzidines	
3,3'-Dichlorobenzidine	EPA 8270D
Benzidine	EPA 8270D
Characteristic Testing	
Corrosivity	EPA 9040C
	EPA 9045D
Ignitability	EPA 1010A
	EPA 1030
Synthetic Precipitation Leaching Proc.	EPA 1312
TCLP	EPA 1311
Chlorinated Hydrocarbon Pesticides	
4,4'-DDD	EPA 8081B
4,4'-DDE	EPA 8081B
4,4'-DDT	EPA 8081B
Aldrin	EPA 8081B
alpha-BHC	EPA 8081B
alpha-Chlordane	EPA 8081B
Atrazine	EPA 8270D
beta-BHC	EPA 8081B
Chlordane Total	EPA 8081B
delta-BHC	EPA 8081B
Dieldrin	EPA 8081B
Endosulfan I	EPA 8081B
Endosulfan II	EPA 8081B
Endosulfan sulfate	EPA 8081B
Endrin	EPA 8081B
Endrin aldehyde	EPA 8081B
Endrin Ketone	EPA 8081B
gamma-Chlordane	EPA 8081B
Heptachlor	EPA 8081B
Heptachlor epoxide	EPA 8081B
Lindane	EPA 8081B
Methoxychlor	EPA 8081B
Toxaphene	EPA 8081B
Chlorinated Hydrocarbons	
1,2,3-Trichlorobenzene	EPA 8260C
1,2,4,5-Tetrachlorobenzene	EPA 8270D
1,2,4-Trichlorobenzene	EPA 8270D

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
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Chlorinated Hydrocarbons	
2-Chloronaphthalene	EPA 8270D
Hexachlorobenzene	EPA 8270D
Hexachlorobutadiene	EPA 8270D
Hexachlorocyclopentadiene	EPA 8270D
Hexachloroethane	EPA 8270D
Chlorophenoxy Acid Pesticides	
2,4,5-T	EPA 8151A
2,4,5-TP (Silvex)	EPA 8151A
2,4-D	EPA 8151A
Dalapon	EPA 8151A
Dicamba	EPA 8151A
Haloethers	
4-Bromophenylphenyl ether	EPA 8270D
4-Chlorophenylphenyl ether	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 8270D
Bis(2-chloroethyl)ether	EPA 8270D
Bis(2-chloroisopropyl) ether	EPA 8270D
Low Level Polynuclear Aromatic Hydrocarbons	
Acenaphthene Low Level	EPA 8270D SIM
Acenaphthylene Low Level	EPA 8270D SIM
Anthracene Low Level	EPA 8270D SIM
Benzo(a)anthracene Low Level	EPA 8270D SIM
Benzo(a)pyrene Low Level	EPA 8270D SIM
Benzo(b)fluoranthene Low Level	EPA 8270D SIM

Low Level Polynuclear Aromatic Hydrocarbons	
Benzo(g,h,i)perylene Low Level	EPA 8270D SIM
Benzo(k)fluoranthene Low Level	EPA 8270D SIM
Chrysene Low Level	EPA 8270D SIM
Dibenzo(a,h)anthracene Low Level	EPA 8270D SIM
Fluoranthene Low Level	EPA 8270D SIM
Fluorene Low Level	EPA 8270D SIM
Indeno(1,2,3-cd)pyrene Low Level	EPA 8270D SIM
Naphthalene Low Level	EPA 8270D SIM
Phenanthrene Low Level	EPA 8270D SIM
Pyrene Low Level	EPA 8270D SIM
Metals I	
Barium, Total	EPA 6010C EPA 6020A
Cadmium, Total	EPA 6010C EPA 6020A
Calcium, Total	EPA 6010C
Chromium, Total	EPA 6010C EPA 6020A
Copper, Total	EPA 6010C EPA 6020A
Iron, Total	EPA 6010C EPA 6020A
Lead, Total	EPA 6010C EPA 6020A
Magnesium, Total	EPA 6010C

Serial No.: 48543

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (2003) for the category ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:

Metals I	
Manganese, Total	EPA 6010C EPA 6020A
Nickel, Total	EPA 6010C EPA 6020A
Potassium, Total	EPA 6010C
Silver, Total	EPA 6010C EPA 6020A
Sodium, Total	EPA 6010C
Metals II	
Aluminum, Total	EPA 6010C EPA 6020A
Antimony, Total	EPA 6010C EPA 6020A
Arsenic, Total	EPA 6010C EPA 6020A
Beryllium, Total	EPA 6010C EPA 6020A
Chromium VI	EPA 7196A
Mercury, Total	EPA 7471B
Selenium, Total	EPA 6010C EPA 6020A
Vanadium, Total	EPA 6010C EPA 6020A
Zinc, Total	EPA 6010C EPA 6020A

Metals III	
Cobalt, Total	EPA 6010C EPA 6020A
Molybdenum, Total	EPA 6010C EPA 6020A
Thallium, Total	EPA 6010C EPA 6020A
Tin, Total	EPA 6010C
Minerals	
Chloride	EPA 9251
Sulfate (as SO4)	EPA 9038
Miscellaneous	
Boron, Total	EPA 6010C
Cyanide, Total	EPA 9012B EPA 9014
Formaldehyde	EPA 8315A
Phenols	EPA 9065
Specific Conductance	EPA 9050A
Nitroaromatics and Isophorone	
1,3,5-Trinitrobenzene	EPA 8330
1,3-Dinitrobenzene	EPA 8330
2,4,6-Trinitrotoluene	EPA 8330
2,4-Dinitrotoluene	EPA 8270D EPA 8330
2,6-Dinitrotoluene	EPA 8270D

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:

Nitroaromatics and Isophorone	
2,6-Dinitrotoluene	EPA 8330
2-Amino-4,6-dinitrotoluene	EPA 8330
2-Nitrotoluene	EPA 8330
3-Nitrotoluene	EPA 8330
4-Amino-2,6-dinitrotoluene	EPA 8330
4-Nitrotoluene	EPA 8330
Hexahydro-1,3,5-trinitro-1,3,5-triazine	EPA 8330
Isophorone	EPA 8270D
Methyl-2,4,6-trinitrophenylnitramine	EPA 8330
Nitrobenzene	EPA 8270D
	EPA 8330
Octahydro-tetranitro-tetrazocine	EPA 8330
Pyridine	EPA 8270D
Nitrosoamines	
N-Nitrosodimethylamine	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 8270D
N-Nitrosodiphenylamine	EPA 8270D
Petroleum Hydrocarbons	
Diesel Range Organics	EPA 8015C
Gasoline Range Organics	EPA 8015C
Phthalate Esters	
Benzyl butyl phthalate	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 8270D
Diethyl phthalate	EPA 8270D
Phthalate Esters	
Dimethyl phthalate	EPA 8270D
Di-n-butyl phthalate	EPA 8270D
Di-n-octyl phthalate	EPA 8270D
Polychlorinated Biphenyls	
PCB-1016	EPA 8082A
PCB-1221	EPA 8082A
PCB-1232	EPA 8082A
PCB-1242	EPA 8082A
PCB-1248	EPA 8082A
PCB-1254	EPA 8082
PCB-1260	EPA 8082A
PCB-1262	EPA 8082A
PCB-1268	EPA 8082A
Polynuclear Aromatic Hydrocarbons	
Acenaphthene	EPA 8270D
Acenaphthylene	EPA 8270D
Anthracene	EPA 8270D
Benzo(a)anthracene	EPA 8270D
Benzo(a)pyrene	EPA 8270D
Benzo(b)fluoranthene	EPA 8270D
Benzo(ghi)perylene	EPA 8270D
Benzo(k)fluoranthene	EPA 8270D
Chrysene	EPA 8270D
Dibenzo(a,h)anthracene	EPA 8270D
Fluoranthene	EPA 8270D

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:

Polynuclear Aromatic Hydrocarbons	
Fluorene	EPA 8270D
Indeno(1,2,3-cd)pyrene	EPA 8270D
Naphthalene	EPA 8270D
Phenanthrene	EPA 8270D
Pyrene	EPA 8270D
Priority Pollutant Phenols	
2,3,4,6-Tetrachlorophenol	EPA 8270D
2,4,5-Trichlorophenol	EPA 8270D
2,4,6-Trichlorophenol	EPA 8270D
2,4-Dichlorophenol	EPA 8270D
2,4-Dimethylphenol	EPA 8270D
2,4-Dinitrophenol	EPA 8270D
2-Chlorophenol	EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 8270D
2-Methylphenol	EPA 8270D
2-Nitrophenol	EPA 8270D
3-Methylphenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 8270D
4-Methylphenol	EPA 8270D
4-Nitrophenol	EPA 8270D
Pentachlorophenol	EPA 8270D
Phenol	EPA 8270D
Semi-Volatile Organics	
1,1'-Biphenyl	EPA 8270D
1,2-Dichlorobenzene, Semi-volatile	EPA 8270D
1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
Acetophenone	EPA 8270D
Benzaldehyde	EPA 8270D
Benzoic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D
Caprolactam	EPA 8270D
Dibenzofuran	EPA 8270D
Volatile Aromatics	
1,2,4-Trichlorobenzene, Volatile	EPA 8260C
1,2,4-Trimethylbenzene	EPA 8260C
1,2-Dichloropenzene	EPA 8260C
1,3,5-Trimethylbenzene	EPA 8260C
1,3-Dichlorobenzene	EPA 8260C
1,4-Dichlorobenzene	EPA 8260C
2-Chlorotoluene	EPA 8260C
4-Chlorotoluene	EPA 8260C
Benzene	EPA 8260C
Bromobenzene	EPA 8260C
Chlorobenzene	EPA 8260C
Ethyl benzene	EPA 8260C
Isopropylbenzene	EPA 8260C
Naphthalene, Volatile	EPA 8260C
n-Butylbenzene	EPA 8260C

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:

Volatile Aromatics	
n-Propylbenzene	EPA 8260C
p-Isopropyltoluene (P-Cymene)	EPA 8260C
sec-Butylbenzene	EPA 8260C
Styrene	EPA 8260C
tert-Butylbenzene	EPA 8260C
Toluene	EPA 8260C
Total Xylenes	EPA 8260C
Volatile Halocarbons	
1,1,1,2-Tetrachloroethane	EPA 8260C
1,1,1-Trichloroethane	EPA 8260C
1,1,2,2-Tetrachloroethane	EPA 8260C
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 8260C
1,1,2-Trichloroethane	EPA 8260C
1,1-Dichloroethane	EPA 8260C
1,1-Dichloroethene	EPA 8260C
1,1-Dichloropropene	EPA 8260C
1,2,3-Trichloropropane	EPA 8260C
1,2-Dibromo-3-chloropropane	EPA 8260C
1,2-Dibromoethane	EPA 8260C
1,2-Dichloroethane	EPA 8260C
1,2-Dichloropropane	EPA 8260C
1,3-Dichloropropane	EPA 8260C
2,2-Dichloropropane	EPA 8260C
2-Chloroethylvinyl ether	EPA 8260C
Bromochloromethane	EPA 8260C

Volatile Halocarbons	
Bromodichloromethane	EPA 8260C
Bromoform	EPA 8260C
Bromomethane	EPA 8260C
Carbon tetrachloride	EPA 8260C
Chloroethane	EPA 8260C
Chloroform	EPA 8260C
Chloromethane	EPA 8260C
cis-1,2-Dichloroethene	EPA 8260C
cis-1,3-Dichloropropene	EPA 8260C
Dibromochloromethane	EPA 8260C
Dibromomethane	EPA 8260C
Dichlorodifluoromethane	EPA 8260C
Hexachlorobutadiene, Volatile	EPA 8260C
Methylene chloride	EPA 8260C
Tetrachloroethene	EPA 8260C
trans-1,2-Dichloroethene	EPA 8260C
trans-1,3-Dichloropropene	EPA 8260C
trans-1,4-Dichloro-2-butene	EPA 8260C
Trichloroethene	EPA 8260C
Trichlorofluoromethane	EPA 8260C
Vinyl chloride	EPA 8260C
Volatile Organics	
1,4-Dioxane	EPA 8260C
2-Butanone (Methylethyl ketone)	EPA 8260C
2-Hexanone	EPA 8260C

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NY Lab Id No: 11148

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All approved analytes are listed below:

Volatile Organics	
4-Methyl-2-Pentanone	EPA 8260C
Acetone	EPA 8260C
Carbon Disulfide	EPA 8260C
Cyclohexane	EPA 8260C
Di-ethyl ether	EPA 8260C
Methyl acetate	EPA 8260C
Methyl cyclohexane	EPA 8260B
	EPA 8260C
Methyl tert-butyl ether	EPA 8260C
tert-butyl alcohol	EPA 8260C
Vinyl acetate	EPA 8260C
Sample Preparation Methods	
	EPA 3005A
	EPA 3050B
	EPA 3540C
	EPA 3546
	EPA 3580A
	EPA 5035A-H
	EPA 5035A-L
	EPA 9010C
	EPA 9030B

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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Revised April 18, 2013

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11627

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

ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below:

Amines	
1,2-Diphenylhydrazine	EPA 8270D
2-Nitroaniline	EPA 8270D
3-Nitroaniline	EPA 8270D
4-Chloroaniline	EPA 8270D
4-Nitroaniline	EPA 8270D
Aniline	EPA 8270D
Carbazole	EPA 8270D
Pyridine	EPA 8270D
Benzidines	
3,3'-Dichlorobenzidine	EPA 8270D
3,3'-Dimethylbenzidine	EPA 8270D
Benzidine	EPA 8270D
Chlorinated Hydrocarbon Pesticides	
4,4'-DDD	EPA 8081B
4,4'-DDE	EPA 8081B
4,4'-DDT	EPA 8081B
Aldrin	EPA 8081B
alpha-BHC	EPA 8081B
alpha-Chlordane	EPA 8081B
beta-BHC	EPA 8081B
Chlordane Total	EPA 8081B
delta-BHC	EPA 8081B
Dieldrin	EPA 8081B
Endosulfan I	EPA 8081B
Endosulfan II	EPA 8081B
Chlorinated Hydrocarbon Pesticides	
Endosulfan sulfate	EPA 8081B
Endrin	EPA 8081B
Endrin aldehyde	EPA 8081B
Endrin Ketone	EPA 8081B
gamma-Chlordane	EPA 8081B
Heptachlor	EPA 8081B
Heptachlor epoxide	EPA 8081B
Lindane	EPA 8081B
Methoxychlor	EPA 8081B
Toxaphene	EPA 8081B
Chlorinated Hydrocarbons	
1,2,4,5-Tetrachlorobenzene	EPA 8270D
1,2,4-Trichlorobenzene	EPA 8270D
2-Chloronaphthalene	EPA 8270D
Hexachlorobenzene	EPA 8270D
Hexachlorobutadiene	EPA 8270D
Hexachlorocyclopentadiene	EPA 8270D
Hexachloroethane	EPA 8270D
Hexachloropropene	EPA 8270D
Dissolved Gases	
Ethane	RSK-175
Ethene (Ethylene)	RSK-175
Methane	RSK-175
Propane	RSK-175

Serial No:: 49076

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320 FORBES BOULEVARD
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NY Lab Id No: 11627

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ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Haloethers	
4-Bromophenylphenyl ether	EPA 8270D
4-Chlorophenylphenyl ether	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 8270D
Bis(2-chloroethyl)ether	EPA 8270D
Bis(2-chloroisopropyl) ether	EPA 8270D
Low Level Polynuclear Aromatics	
Acenaphthene Low Level	EPA 8270D SIM
Acenaphthylene Low Level	EPA 8270D SIM
Anthracene Low Level	EPA 8270D SIM
Benzo(a)anthracene Low Level	EPA 8270D SIM
Benzo(a)pyrene Low Level	EPA 8270D SIM
Benzo(b)fluoranthene Low Level	EPA 8270D SIM
Benzo(g,h,i)perylene Low Level	EPA 8270D SIM
Benzo(k)fluoranthene Low Level	EPA 8270D SIM
Chrysene Low Level	EPA 8270D SIM
Dibenzo(a,h)anthracene Low Level	EPA 8270D SIM
Fluoranthene Low Level	EPA 8270D SIM
Fluorene Low Level	EPA 8270D SIM
Indeno(1,2,3-cd)pyrene Low Level	EPA 8270D SIM
Naphthalene Low Level	EPA 8270D SIM
Phenanthrene Low Level	EPA 8270D SIM
Pyrene Low Level	EPA 8270D SIM
Mineral	
Alkalinity	SM 18-21 2320B (97)

Nitroaromatics and Isophorone	
2,4-Dinitrotoluene	EPA 8270D
2,6-Dinitrotoluene	EPA 8270D
Isophorone	EPA 8270D
Nitrobenzene	EPA 8270D
Nitrosoamines	
N-Nitrosodimethylamine	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 8270D
N-Nitrosodiphenylamine	EPA 8270D
Organophosphate Pesticides	
Atrazine	EPA 8270D
Petroleum Hydrocarbons	
Diesel Range Organics	EPA 8015D
Phthalate Esters	
Benzyl butyl phthalate	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 8270D
Diethyl phthalate	EPA 8270D
Dimethyl phthalate	EPA 8270D
Di-n-butyl phthalate	EPA 8270D
Di-n-octyl phthalate	EPA 8270D
Polychlorinated Biphenyls	
PCB-118	EPA 8082A
PCB-128	EPA 8082A
PCB-1016	EPA 8082A

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320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No. 11627

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ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Polychlorinated Biphenyls	
PCB-1221	EPA 8082A
PCB-1232	EPA 8082A
PCB-1242	EPA 8082A
PCB-1248	EPA 8082A
PCB-1254	EPA 8082A
PCB-1260	EPA 8082A
Polynuclear Aromatics	
Acenaphthene	EPA 8270D
Acenaphthylene	EPA 8270D
Anthracene	EPA 8270D
Benzo(a)anthracene	EPA 8270D
Benzo(a)pyrene	EPA 8270D
Benzo(b)fluoranthene	EPA 8270D
Benzo(ghi)perylene	EPA 8270D
Benzo(k)fluoranthene	EPA 8270D
Chrysene	EPA 8270D
Dibenzo(a,h)anthracene	EPA 8270D
Fluoranthene	EPA 8270D
Fluorene	EPA 8270D
Indeno(1,2,3-cd)pyrene	EPA 8270D
Naphthalene	EPA 8270D
Phenanthrene	EPA 8270D
Pyrene	EPA 8270D
Priority Pollutant Phenols	
2,3,4,6-Tetrachlorophenol	EPA 8270D
Priority Pollutant Phenols	
2,4,5-Trichlorophenol	EPA 8270D
2,4,6-Trichlorophenol	EPA 8270D
2,4-Dichlorophenol	EPA 8270D
2,4-Dimethylphenol	EPA 8270D
2,4-Dinitrophenol	EPA 8270D
2-Chlorophenol	EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 8270D
2-Methylphenol	EPA 8270D
2-Nitrophenol	EPA 8270D
3-Methylphenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 8270D
4-Methylphenol	EPA 8270D
4-Nitrophenol	EPA 8270D
Pentachlorophenol	EPA 8270D
Phenol	EPA 8270D
Residue	
Solids, Total Suspended	SM 18-21 2540D (97)
Semi-Volatile Organics	
1,2-Dichlorobenzene, Semi-volatile	EPA 8270D
1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
Acetophenone	EPA 8270D
Benzoic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D

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MANSFIELD, MA 02048

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ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Semi-Volatile Organics

Caprolactam	EPA 8270D
Dibenzofuran	EPA 8270D

Wastewater Metals I

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

Wastewater Metals II

Aluminum, Total	EPA 6020A
Antimony, Total	EPA 6020A
Arsenic, Total	EPA 6020A
Beryllium, Total	EPA 6020A
Mercury, Low Level	EPA 1631E
Mercury, Total	EPA 7470A
Selenium, Total	EPA 6020A
Vanadium, Total	EPA 6020A
Zinc, Total	EPA 6020A

Wastewater Metals III

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

Wastewater Miscellaneous

Specific Conductance	EPA 9050A
Turbidity	EPA 180.1 Rev. 2.0

Sample Preparation Methods

	EPA 3020A
	EPA 3510C

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Amines	
1,2-Diphenylhydrazine	EPA 8270D
2-Nitroaniline	EPA 8270D
3-Nitroaniline	EPA 8270D
4-Chloroaniline	EPA 8270D
4-Nitroaniline	EPA 8270D
Aniline	EPA 8270D
Carbazole	EPA 8270D
Benzidines	
3,3'-Dichlorobenzidine	EPA 8270D
Benzidine	EPA 8270D
Characteristic Testing	
Corrosivity	EPA 9040C
	EPA 9045D
TCLP	EPA 1311
Chlorinated Hydrocarbon Pesticides	
4,4'-DDD	EPA 8081B
4,4'-DDE	EPA 8081B
4,4'-DDT	EPA 8081B
Aldrin	EPA 8081B
alpha-BHC	EPA 8081B
alpha-Chlordane	EPA 8081B
beta-BHC	EPA 8081B
Chlordane Total	EPA 8081B
delta-BHC	EPA 8081B
Dieldrin	EPA 8081B
Endosulfan I	EPA 8081B
Endosulfan II	EPA 8081B
Endosulfan sulfate	EPA 8081B
Endrin	EPA 8081B
Endrin aldehyde	EPA 8081B
Endrin Ketone	EPA 8081B
gamma-Chlordane	EPA 8081B
Heptachlor	EPA 8081B
Heptachlor epoxide	EPA 8081B
Lindane	EPA 8081B
Methoxychlor	EPA 8081B
Pentachloronitrobenzene	EPA 8270D
Toxaphene	EPA 8081B
Chlorinated Hydrocarbons	
1,2,4,5-Tetrachlorobenzene	EPA 8270D
1,2,4-Trichlorobenzene	EPA 8270D
2-Chloronaphthalene	EPA 8270D
Hexachlorobenzene	EPA 8270D
Hexachlorobutadiene	EPA 8270D
Hexachlorocyclopentadiene	EPA 8270D
Hexachloroethane	EPA 8270D
Hexachloropropene	EPA 8270D
Halоethers	
4-Bromophenylphenyl ether	EPA 8270D

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11627

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:

Haloethers	
4-Chlorophenylphenyl ether	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 8270D
Bis(2-chloroethyl)ether	EPA 8270D
Bis(2-chloroisopropyl) ether	EPA 8270D
Low Level Polynuclear Aromatic Hydrocarbons	
Acenaphthene Low Level	EPA 8270D SIM
Acenaphthylene Low Level	EPA 8270D SIM
Anthracene Low Level	EPA 8270D SIM
Benzo(a)anthracene Low Level	EPA 8270D SIM
Benzo(a)pyrene Low Level	EPA 8270D SIM
Benzo(b)fluoranthene Low Level	EPA 8270D SIM
Benzo(g,h,i)perylene Low Level	EPA 8270D SIM
Benzo(k)fluoranthene Low Level	EPA 8270D SIM
Chrysene Low Level	EPA 8270D SIM
Dibenzo(a,h)anthracene Low Level	EPA 8270D SIM
Fluoranthene Low Level	EPA 8270D SIM
Fluorene Low Level	EPA 8270D SIM
Indeno(1,2,3-cd)pyrene Low Level	EPA 8270D SIM
Naphthalene Low Level	EPA 8270D SIM
Phenanthrene Low Level	EPA 8270D SIM
Pyrene Low Level	EPA 8270D SIM
Metals I	
Barium, Total	EPA 6020A
Cadmium, Total	EPA 6020A
Chromium, Total	EPA 6020A
Metals I	
Copper, Total	EPA 6020A
Iron, Total	EPA 6020A
Lead, Total	EPA 6020A
Manganese, Total	EPA 6020A
Nickel, Total	EPA 6020A
Silver, Total	EPA 6020A
Metals II	
Aluminum, Total	EPA 6020A
Antimony, Total	EPA 6020A
Arsenic, Total	EPA 6020A
Beryllium, Total	EPA 6020A
Mercury, Total	EPA 7471B
	EPA 7474
Selenium, Total	EPA 6020A
Vanadium, Total	EPA 6020A
Zinc, Total	EPA 6020A
Metals III	
Cobalt, Total	EPA 6020A
Molybdenum, Total	EPA 6020A
Thallium, Total	EPA 6020A
Miscellaneous	
Organic Carbon, Total	EPA 9060
Nitroaromatics and Isophorone	
2,4-Dinitrotoluene	EPA 8270D

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Nitroaromatics and Isophorone	
2,6-Dinitrotoluene	EPA 8270D
Isophorone	EPA 8270D
Nitrobenzene	EPA 8270D
Pyridine	EPA 8270D
Nitrosoamines	
N-Nitrosodimethylamine	EPA 8270D
N-Nitroso-di-n-propylamine	EPA 8270D
N-Nitrosodiphenylamine	EPA 8270D
Petroleum Hydrocarbons	
Diesel Range Organics	EPA 8015D
Phthalate Esters	
Benzyl butyl phthalate	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 8270D
Diethyl phthalate	EPA 8270D
Dimethyl phthalate	EPA 8270D
Di-n-butyl phthalate	EPA 8270D
Di-n-octyl phthalate	EPA 8270D
Polychlorinated Biphenyls	
PCB-1	EPA 8082A
PCB-1016	EPA 8082A
PCB-1221	EPA 8082A
PCB-1232	EPA 8082A
PCB-1242	EPA 8082A
PCB-1248	EPA 8082A
Polychlorinated Biphenyls	
PCB-1254	EPA 8082A
PCB-1260	EPA 8082A
Polynuclear Aromatic Hydrocarbons	
Acenaphthene	EPA 8270D
Acenaphthylene	EPA 8270D
Anthracene	EPA 8270D
Benzo(a)anthracene	EPA 8270D
Benzo(a)pyrene	EPA 8270D
Benzo(b)fluoranthene	EPA 8270D
Benzo(ghi)perylene	EPA 8270D
Benzo(k)fluoranthene	EPA 8270D
Chrysene	EPA 8270D
Dibenzo(a,h)anthracene	EPA 8270D
Fluoranthene	EPA 8270D
Fluorene	EPA 8270D
Indeno(1,2,3-cd)pyrene	EPA 8270D
Naphthalene	EPA 8270D
Phenanthrene	EPA 8270D
Pyrene	EPA 8270D
Priority Pollutant Phenols	
2,3,4,6-Tetrachlorophenol	EPA 8270D
2,4,5-Trichlorophenol	EPA 8270D
2,4,6-Trichlorophenol	EPA 8270D
2,4-Dichlorophenol	EPA 8270D
2,4-Dimethylphenol	EPA 8270D

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below

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

Semi-Volatile Organics	
1,2-Dichlorobenzene, Semi-volatile	EPA 8270D
1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
Acetophenone	EPA 8270D
Benzoic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D
Dibenzofuran	EPA 8270D

Sample Preparation Methods
EPA 3050B
EPA 3051A
EPA 3540C
EPA 3570

Sample Preparation Methods
EPA 3580A

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ENVIRONMENTAL ANALYSES AIR AND EMISSIONS
All approved analytes are listed below:

Acrylates	
Acetonitrile	EPA TO-15
Acrylonitrile	EPA TO-15
Methyl methacrylate	EPA TO-15
Chlorinated Hydrocarbons	
1,2,4-Trichlorobenzene	EPA TO-15
Hexachlorobutadiene	EPA TO-15
Polychlorinated Biphenyls	
PCB-1016	EPA TO-10A
PCB-1221	EPA TO-10A
PCB-1232	EPA TO-10A
PCB-1242	EPA TO-10A
PCB-1248	EPA TO-10A
PCB-1254	EPA TO-10A
PCB-1260	EPA TO-10A
PCB-1262	EPA TO-10A
PCB-1268	EPA TO-10A
Polynuclear Aromatics	
Naphthalene	EPA TO-15
Purgeable Aromatics	
1,2,4-Trimethylbenzene	EPA TO-15
1,2-Dichlorobenzene	EPA TO-15
1,3,5-Trimethylbenzene	EPA TO-15
1,3-Dichlorobenzene	EPA TO-15
1,4-Dichlorobenzene	EPA TO-15

Purgeable Aromatics	
2-Chlorotoluene	EPA TO-15
Benzene	EPA TO-15
Chlorobenzene	EPA TO-15
Ethyl benzene	EPA TO-15
Isopropylbenzene	EPA TO-15
m/p-Xylenes	EPA TO-15
o-Xylene	EPA TO-15
Styrene	EPA TO-15
Toluene	EPA TO-15
Total Xylenes	EPA TO-15
Purgeable Halocarbons	
1,1,1-Trichloroethane	EPA TO-15
1,1,2,2-Tetrachloroethane	EPA TO-15
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA TO-15
1,1,2-Trichloroethane	EPA TO-15
1,1-Dichloroethane	EPA TO-15
1,1-Dichloroethene	EPA TO-15
1,2-Dibromo-3-chloropropane	EPA TO-15
1,2-Dibromoethane	EPA TO-15
1,2-Dichloroethane	EPA TO-15
1,2-Dichloropropane	EPA TO-15
3-Chloropropene (Allyl chloride)	EPA TO-15
Bromodichloromethane	EPA TO-15
Bromoform	EPA TO-15
Bromomethane	EPA TO-15

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ENVIRONMENTAL ANALYSES AIR AND EMISSIONS

All approved analytes are listed below:

Purgeable Halocarbons	
Carbon tetrachloride	EPA TO-15
Chloroethane	EPA TO-15
Chloroform	EPA TO-15
Chloromethane	EPA TO-15
cis-1,2-Dichloroethene	EPA TO-15
cis-1,3-Dichloropropene	EPA TO-15
Dibromochloromethane	EPA TO-15
Dichlorodifluoromethane	EPA TO-15
Methylene chloride	EPA TO-15
Tetrachloroethene	EPA TO-15
trans-1,2-Dichloroethene	EPA TO-15
trans-1,3-Dichloropropene	EPA TO-15
Trichloroethene	EPA TO-15
Trichlorofluoromethane	EPA TO-15
Vinyl bromide	EPA TO-15
Vinyl chloride	EPA TO-15
Volatile Chlorinated Organics	
Benzyl chloride	EPA TO-15
Volatile Organics	
1,2-Dichlorotetrafluoroethane	EPA TO-15
1,3-Butadiene	EPA TO-15
1,4-Dioxane	EPA TO-15
2,2,4-Trimethylpentane	EPA TO-15
2-Butanone (Methylethyl ketone)	EPA TO-15
Acetaldehyde	EPA TO-15
Acetone	EPA TO-15
Carbon Disulfide	EPA TO-15
Cyclohexane	EPA TO-15
Hexane	EPA TO-15
Isopropanol	EPA TO-15
Methanol	EPA TO-15
Methyl tert-butyl ether	EPA TO-15
n-Heptane	EPA TO-15
tert-butyl alcohol	EPA TO-15
Vinyl acetate	EPA TO-15

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