September 5, 2017

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 2017
West 42nd Street – River Place I
West 41st – West 42nd Streets
New York, New York 110036
NYSDEC BCP Site No. C231024
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 I 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 2016.

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.

Institutional Control/Engineering Controls (IC/EC) Inspection

Institutional and engineering controls at the site include a cover system 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. The building slab and the park area were inspected by Langan on August 14, 2017 and were observed to be intact.

Photographs of the site cover are provided as Attachment B.

Environmental Easement – Groundwater is not used for any purpose. Land use remains as multi-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 at the site. Langan performed the seventh annual monitoring event on October 14, 2016. The seventh annual groundwater monitoring report is included as Attachment C. The next annual groundwater monitoring event is anticipated to occur in October 2017.

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. On August 31, 2011, NYSDEC agreed that no further indoor air sampling would be required after the December 2011 event.

Closing

The SMP is being implemented in accordance with the schedules discussed above. All institutional and engineering controls are in place, have not been altered and are still effective. Should you have any questions, please contact me at 212-479-5582.

Sincerely,
Langan Engineering, Environmental, Surveying and Landscape Architecture, 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- 2016

Cc: William R. Dacunto – River Place 1 LLC
Richard Rienzo - Con Edison

Attachment A
NYSDEC Institutional and Engineering Controls Certification Form

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. **C231024**

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

Site Address: 640 W 42nd Street Zip Code: 10036
City/Town: New York
County: New York
Site Acreage: 2.7

Reporting Period: August 06, 2016 to August 06, 2017

	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

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. C231024

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
10890001	River Place I, LLC	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, but are 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
10890001	Cover System

Ground covers act to prevent people from being exposed to the contaminated soils.

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. C231024

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

7/25/17
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 JASON J HAYES (print name) at 21 PENN PLAZA, NEW YORK, NEW YORK 10001 (print business address).

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

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

8-17-2017
Date

Attachment B
Site Cover Photographs

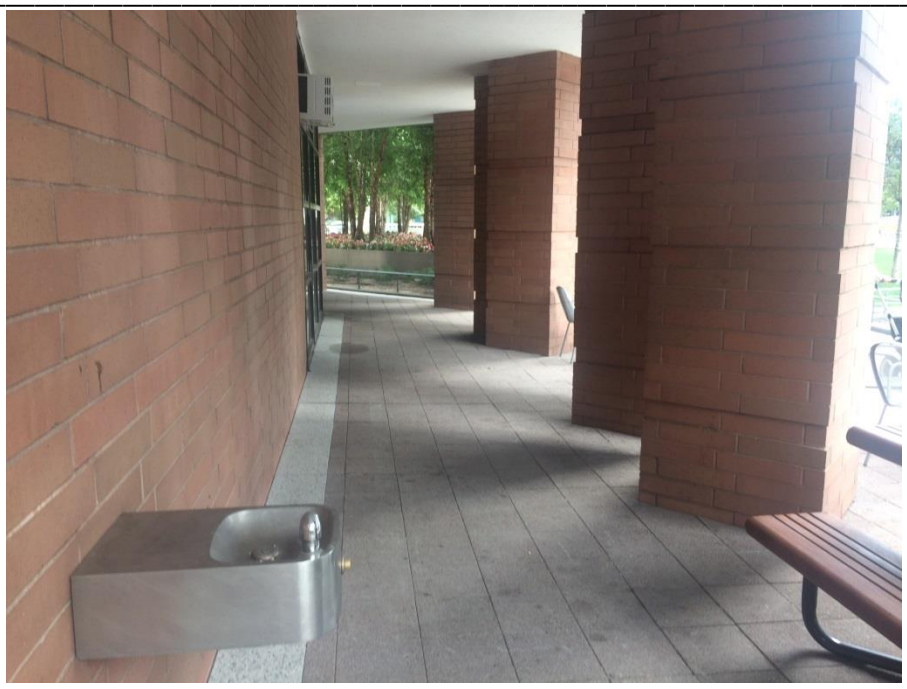

Photo 1: View of walkway at the Site.

Photo 2: View of building entrance ground cover at the Site.

Photo 3: View of ground cover and roadway at the Site.

Photo 4: View of ground cover and landscaped area at the Site.

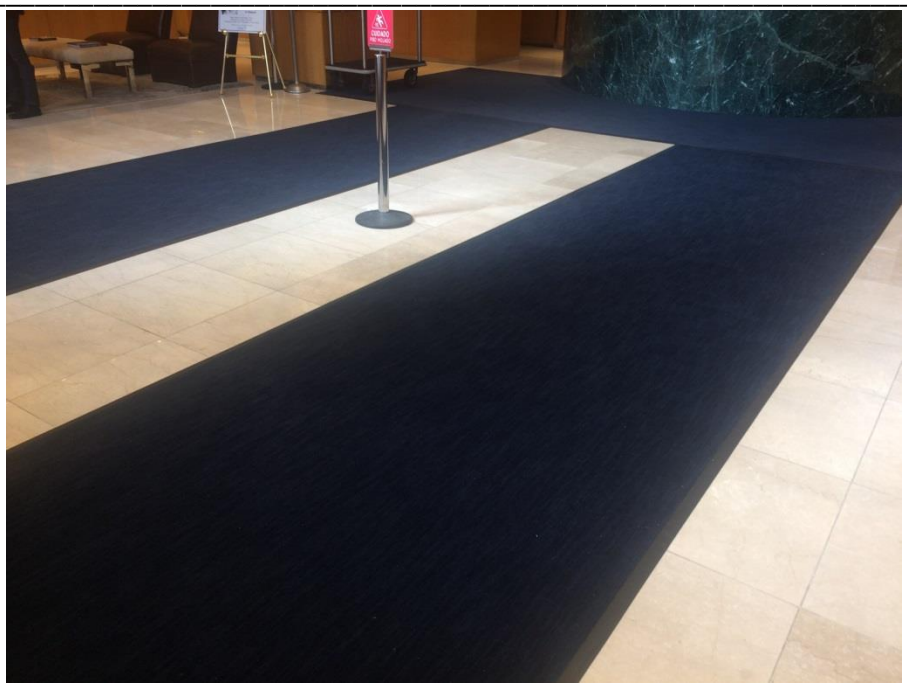

Photo 5: Surface cover in Site lobby.

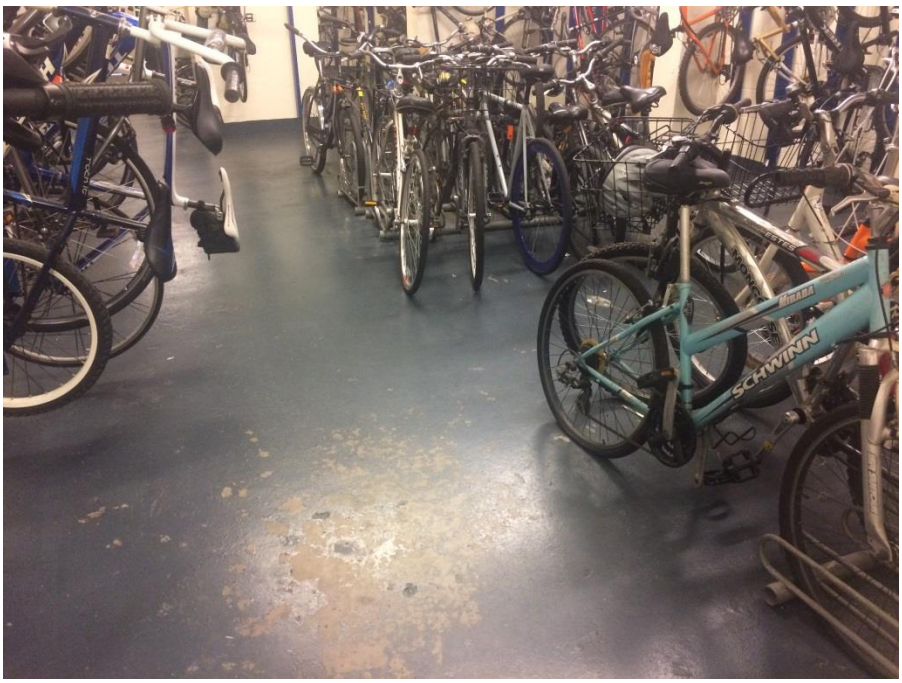

Photo 6: Ground cover in the bicycle storage room of the Site.

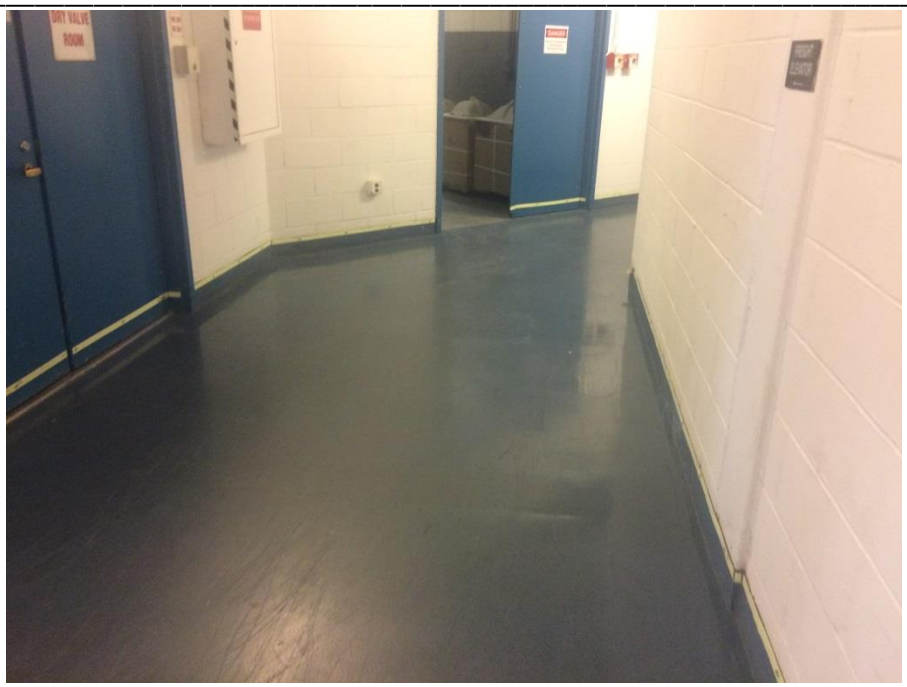

Photo 7: Typical surface cover in ground floor hallway area of Site.

Photo 8: Surface cover in Site electrical room.

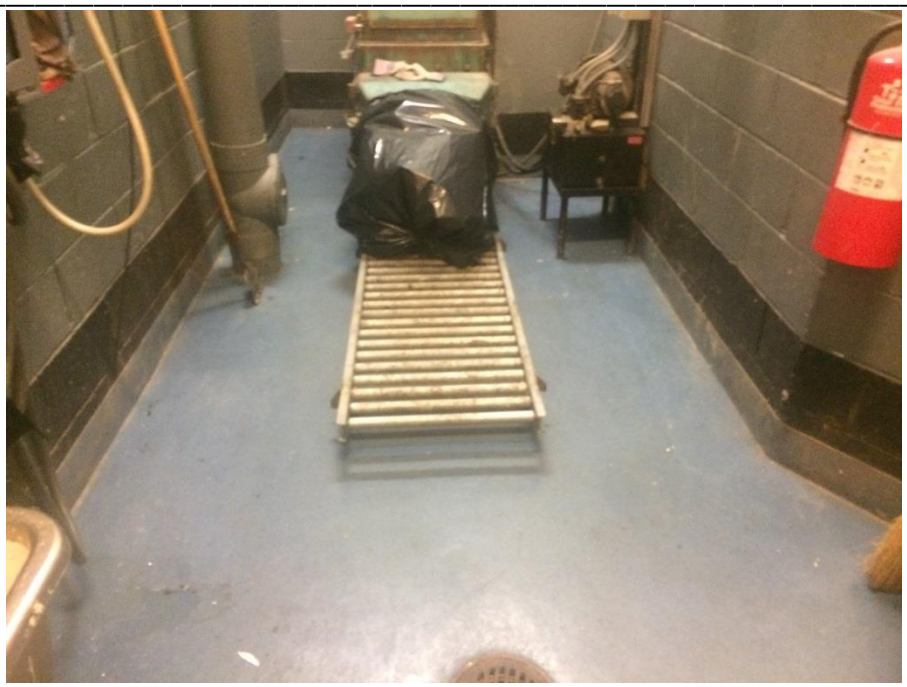

Photo 9: Surface cover in Site compactor room.

Photo 10: Surface cover in Site fire pump room.

Photo 11: Surface cover in Site boiler room.

Photo 12: Surface cover in Site gas meter room.

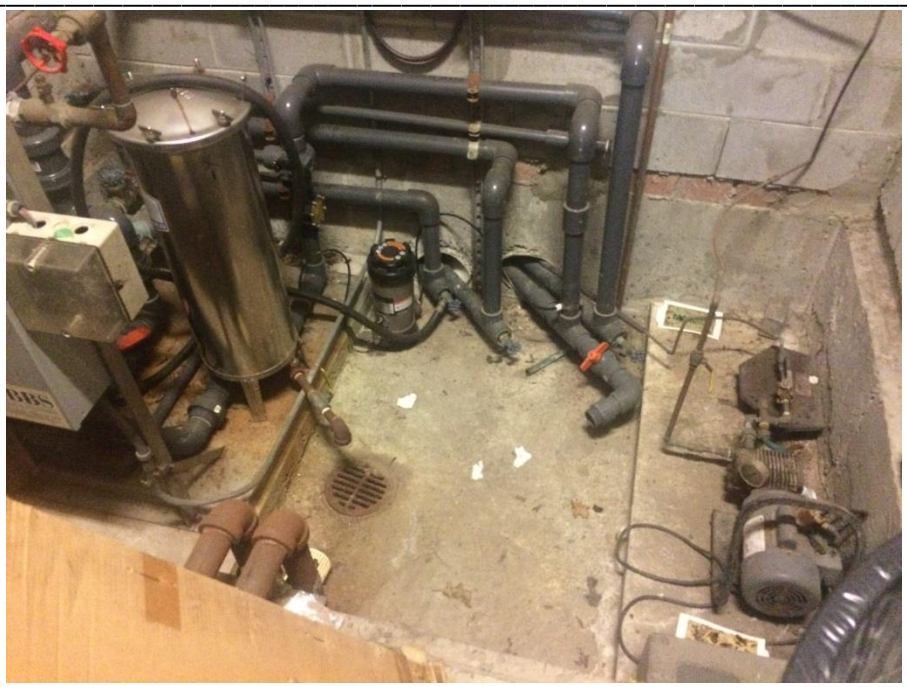

Photo 13: Surface cover in oil pump room.

Photo 14: Surface cover beneath Site AST.

Photo 15: Surface cover in the Site oil pump room.

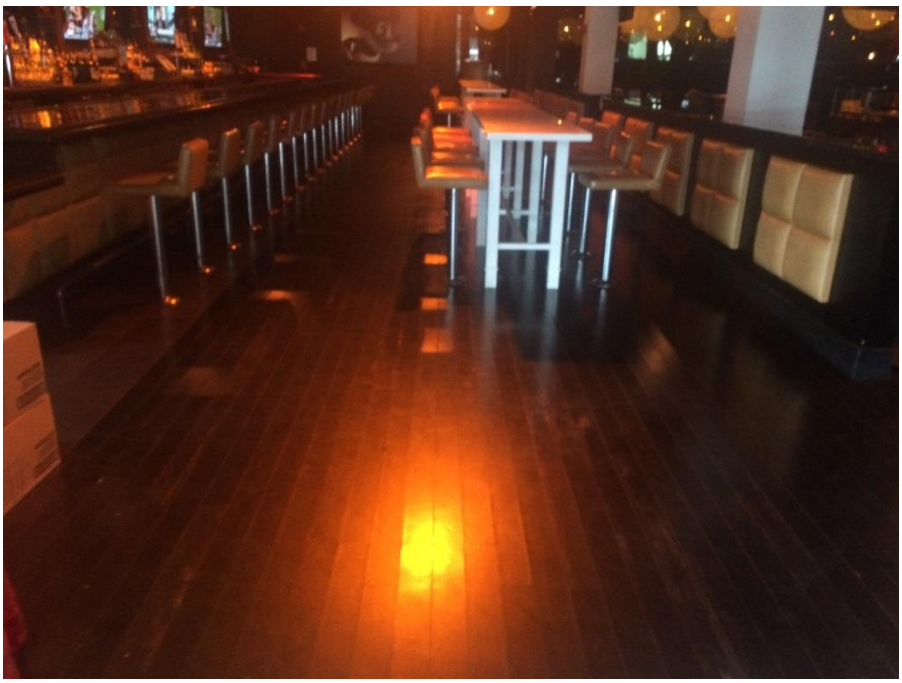

Photo 16: Site bowling alley lounge area.

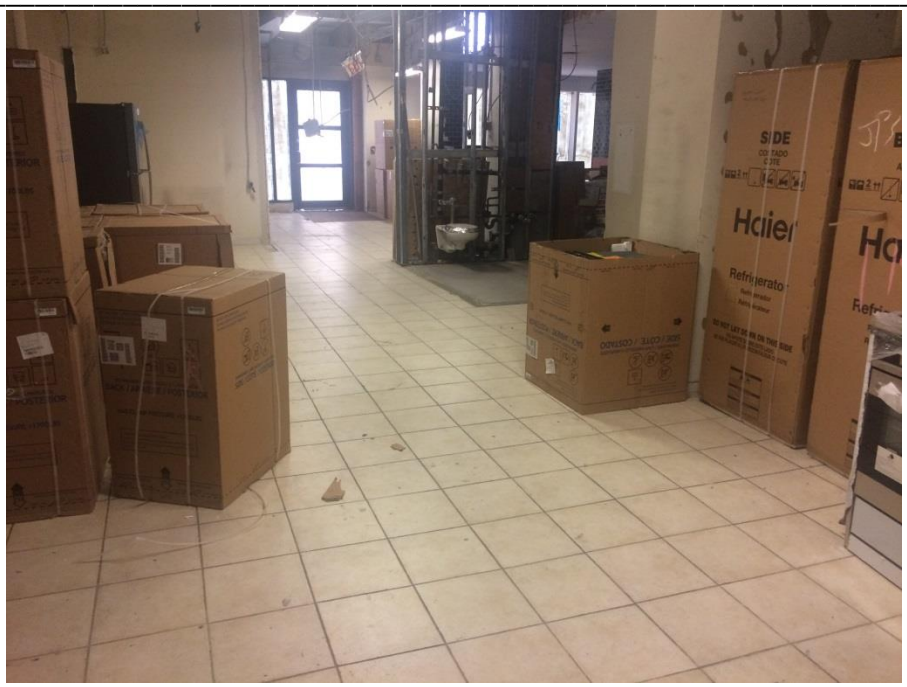

Photo 17: Surface cover at vacant commercial space within Site.

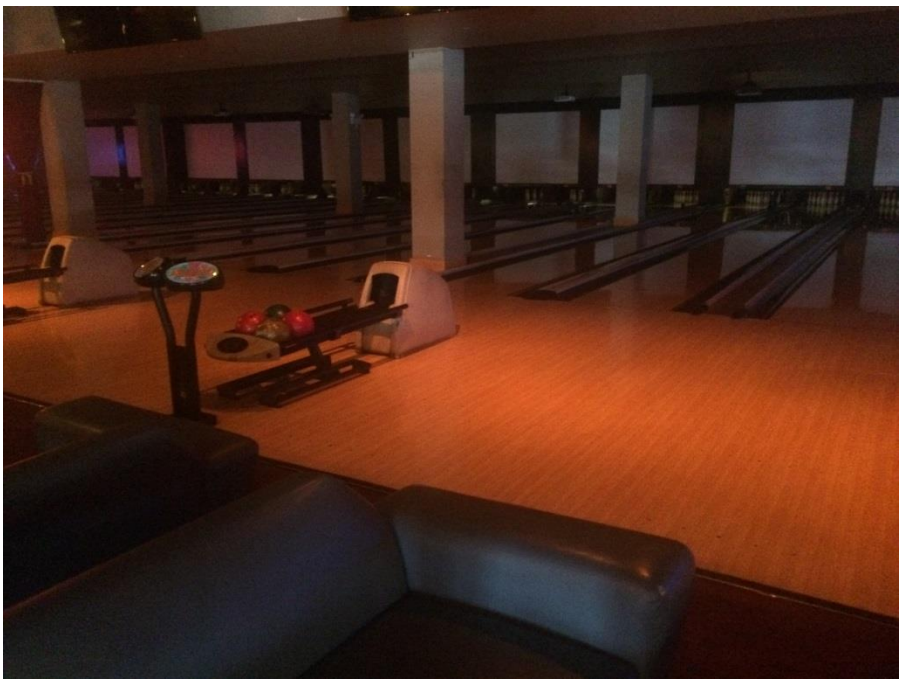

Photo 18: Site bowling alley.

Photo 19: Playground and pavers at Site.

Photo 20: Fill port on 41st Street sidewalk.

Attachment C
Annual Groundwater Monitoring Report- 2016

November 11, 2016

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 – 2016
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 sixth annual sampling event conducted in October 2016.

2016 Annual Groundwater Sampling

On October 14, 2016, 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 1.55 and 2.75 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_101615 and MW-S2_101615 were collected using a Waterra pump and dedicated tubing.

Groundwater samples MW-N2_101416 and MW-S2_101416 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 sheen was observed on purged water from MW-N2.
- Odor was noted in both monitoring wells.
- The wells were observed to be in good condition.

Groundwater Analytical Results

Analytical results for the 2016 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
• benzene	• p/m-xylene
• bromomethane	• o-xylene
• ethylbenzene	• toluene
SVOCs	
• 2,4-dimethylphenol	• chrysene
• acenaphthene	• flouranthene
• benzo(a)anthracene	• indeno(1,2,3-cd)pyrene
• benzo(a)pyrene	• naphthalene
• benzo(b)fluoranthene	• phenanthrene
• benzo(k)fluoranthene	• pyrene
• biphenyl	
Inorganics	
• cyanide	• manganese
• iron	• sodium
• magnesium	

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

Analytical results for the First Quarter 2009 through Sixth Annual 2016 sampling rounds are summarized in Table 1 and the laboratory analytical report for the 2016 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
Senior Project Manager

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

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		
		1st Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter[7]	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		YEAR 6		
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**		
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**		
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**		
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	
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	
Benzene	1	**19000**	**19000**	**17000**	**15000**	**2900**	**610**	**1100**	**2100**	**2400**	**2400**		**1600**		**1100**		**1400**		**1200**		**1300**		
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	
Ethylbenzene	5	**1900**	**1900**	**1900**	**1800**	**1400**	**170**	**410**	**810**	**980**	**810**		**580**	J	**250**		**300**		**240**	J	**340**		
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	
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	
Naphthalene	10	**15000**	**15000**	**18000**	**19000**	**22000**	**4200**	**5400**	**12000**	**15000**	**10000**		**9200**		**3600**		**3900**		**4900**		**5000**		
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	
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	
o-Xylene	5	**1400**	**1300**	**1400**	**1200**	**1000**	**180**	**330**	**590**	**760**	**630**		**470**	J	**230**	J	**280**		**230**	J	**300**		
p/m-Xylene	5	**3200**	**3100**	**3100**	**2900**	**2200**	**330**	**600**	**1100**	**1400**	**1200**		**760**		**280**		**370**		**300**		**370**		
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	
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	
Toluene	5	**4200**	**4000**	**4400**	**4100**	**740**	*75*	U *150*	U **290**	**420**	**410**		**240**	J	**90**	J	**120**	J	**85**	J	**76**	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**		
Acenaphthene	20	**120**	**160**	**95**	**99**	**61**	**65**	**93**	**97**	**170**	**140**		**190**		**96**		**110**		77		**93**		
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**		
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**		
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**		
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**		
Biphenyl	5	**50**	**56**	*26*	U **36**	**72**	*250*	U **30**	**34**	**52**	**46**		**47**		**28**		**33**		**20**		**24**		
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	
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**		
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**		
Fluorene	50	**56**	**80**	**59**	47	40	U 39	**60**	*80*	U *100*	U **58**	J	**67**		29		41		30	J	44		
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**		
Naphthalene	10	**12000**	**14000**	**8900**	**9400**	**2200**	**2700**	**4200**	**6900**	**9100**	**6800**		**8400**		**2800**		**3000**		**2400**		**3400**		
Phenanthrene	50	**100**	**150**	**53**	**62**	40	**52**	**84**	*80*	U *100*	U **97**		**90**		33		**75**		48		**97**		
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	
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**		
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		
Iron, Total	300	**5300**	**2700**	**1900**	**1200**	**3500**	**4000**	**4800**	**2600**	**12000**	**3300**		**1270**		**1780**		**2870**		**1620**		**2500**		
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		
Magnesium, Total	35000	**70000**	**72000**	**70000**	**59000**	**83000**	**46000**	**46000**	**51000**	**86000**	**64000**		**42000**		**57700**		**63400**		**59600**		**84700**		
Manganese, Total	300	**1570**	**1430**	**1570**	**1340**	**746**	**603**	**632**	**528**	**816**	**582**		**542.8**		**337.5**		**470.6**		**436.5**		**1070**		
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	0.2	U	
Sodium, Total	20000	**300000**	**320000**	**270000**	**250000**	**240000**	**110000**	**160000**	**200000**	**240000**	**210000**		**127000**		**175000**		**172000**		**189000**		**222000**		
General Chemistry																							
Cyanide, Total	200	**1100**	**1090**	**789**	**799**	**890**	**1780**	**1500**	**1060**	**1680**	**612**		126		**1210**		**1000**		156		**910**		

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 NYSDEC TOGS 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
		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	
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	
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	
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	
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	
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
Benzene	1	**140**		**170**		**200**		**75**		**120**		**110**		**120**		**23**		**94**		**99**		**44**		**26**		**39**	
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
Ethylbenzene	5	**160**		**20**		**710**		**330**		**590**		**460**		**560**		**100**		**260**		**160**		**60**		**41**		**42**	
Isopropylbenzene	5	**35**		**5.4**		**64**		**30**		**61**		**44**		**63**		**13**		**55**		**46**		**19**		**15**		**18**	
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
Naphthalene	10	**610**		**350**		**4900**		**1800**		**1700**		**1900**		**1100**		**170**		**150**		**62**		**36**		**50**		**15**	
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
n-Propylbenzene	5	**19**		5	U	**42**		*25*	U	**37**		**30**		**37**		**8.5**		**34**		**22**		**9.3**		**5.6**		**7.5**	
o-Xylene	5	**43**		**16**		**320**		**110**		**150**		**70**		*50*	U	**24**		**20**		**12**		**12**		**10**		**16**	
p/m-Xylene	5	**50**		**21**		**410**		**150**		**150**		**82**		*50*	U	**17**		**9.2**		*10*	U	4.8		4.2		4.8	
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
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
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
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
Acenaphthene	20	14		0.2	U	*200*	U	**63**		**59**		**41**		**63**		15		**49**		**39**		**34**		17		16	
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	
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**	
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**	
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
Biphenyl	5	**8.5**		*5.1*	U	**49**		*250*	U	**46**		**27**		**55**		**6.9**		**26**		**13**		*10*	U	2.6		2	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
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**	
Fluoranthene	50	1.6		0.2	U	*200*	U	27		15		12		18		9		16		15		12		5.3		2.5	
Fluorene	50	8.9		0.2	U	*200*	U	**61**		**53**		36		42		13		33		16		6.1		4.2		3.4	
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**	
Naphthalene	10	**300**		0.62		**11000**		**1400**		**1600**		**990**		**400**		9.3		**90**		**51**		**19**		**23**		**10**	
Phenanthrene	50	-		0.2	U	*200*	U	**120**		**74**		**52**		**63**		16		32		11		25		5.4		0.44	
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
Pyrene	50	1.2		0.2	U	NT		10	U	20		15		25		12		23		21		18		8.1		2.4	
Total Metals																											
Arsenic, Total	25	20		6		17		13		10		18		19		13		10.5		9.04		18.2		5.4		6.8	
Iron, Total	300	**21000**		**9200**		**3200**		**11000**		**5000**		**9800**		**12000**		**9900**		**12100**		**5830**		**33400**		**5800**		**10,300**	
Lead, Total	25	**158**		**45**		17		**117**		**29**		**86**		**166**		**42**		**108.7**		**70.29**		**366.9**		13.3		13.1	
Magnesium, Total	35000	**71000**		**48000**		**120000**		**87000**		**85000**		**93000**		**84000**		**68000**		**43800**		**53800**		**95500**		**81100**		**91200**	
Manganese, Total	300	**598**		**403**		**327**		**636**		**430**		**492**		**558**		**537**		**574.9**		279.6		**1074**		**529.7**		**519.1**	
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
Sodium, Total	20000	**96000**		**100000**		**98000**		**89000**		**68000**		**76000**		**67000**		**42000**		**32600**		**49400**		**71700**		**56600**		**66700**	
General Chemistry																											
Cyanide, Total	200	**1920**		**1920**		**1090**		**973**		**1110**		**1540**		**1410**		**798**		152		**1030**		**1380**		135		**842**	

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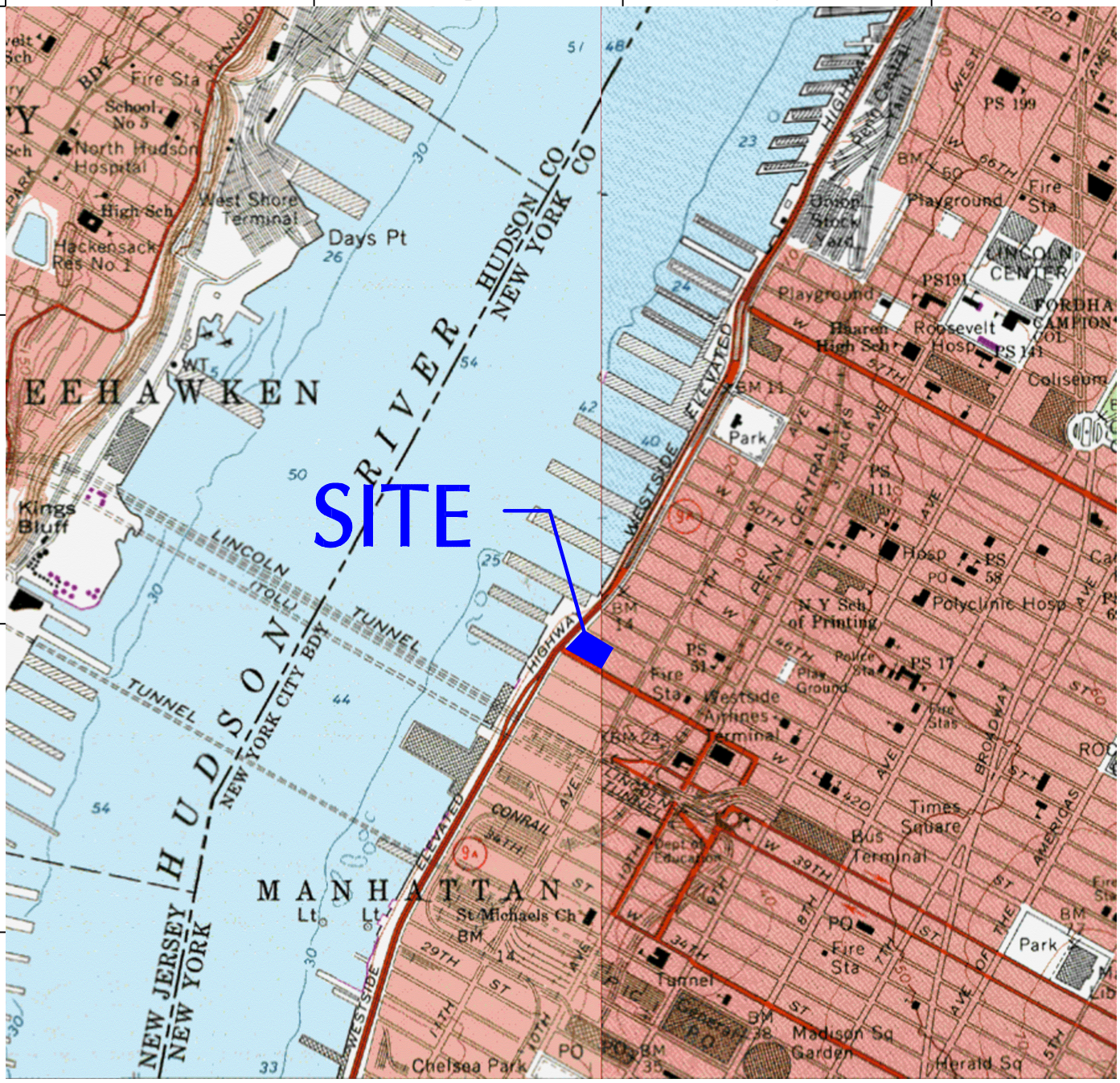
Table 1
VOC, SVOC, Metals and Cyanide Exceedances in Groundwater Samples
River Place I and II
New York, New York
Langan Project No. 170040901

		Quality Control													
		2009				2010					2011	2012	2015	2016	
		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	
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**	
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**	
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**	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
SVOCs (µg/L)															
2,4-Dimethylphenol	50	9.6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Acenaphthene	20	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Benzo(a)anthracene	0.002	*0.19* U	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	
Benzo(b)fluoranthene	0.002	*0.19* U	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	
Biphenyl	5	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Bis(2-Ethylhexyl)phthalate	5	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Chrysene	0.002	*0.19* U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Fluoranthene	50	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Fluorene	50	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Indeno(1,2,3-cd)Pyrene	0.002	*0.19* U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Naphthalene	10	0.34	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Phenanthrene	50	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Phenol	1	*6.7* U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Pyrene	50	0.2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Total Metals															
Arsenic, Total	25	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Iron, Total	300	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Lead, Total	25	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Magnesium, Total	35000	100 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Manganese, Total	300	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Mercury, Total	0.7	0.2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Sodium, Total	20000	2000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
General Chemistry															
Cyanide, Total	200	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

Notes:
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 NYSDEC TOGS 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.

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

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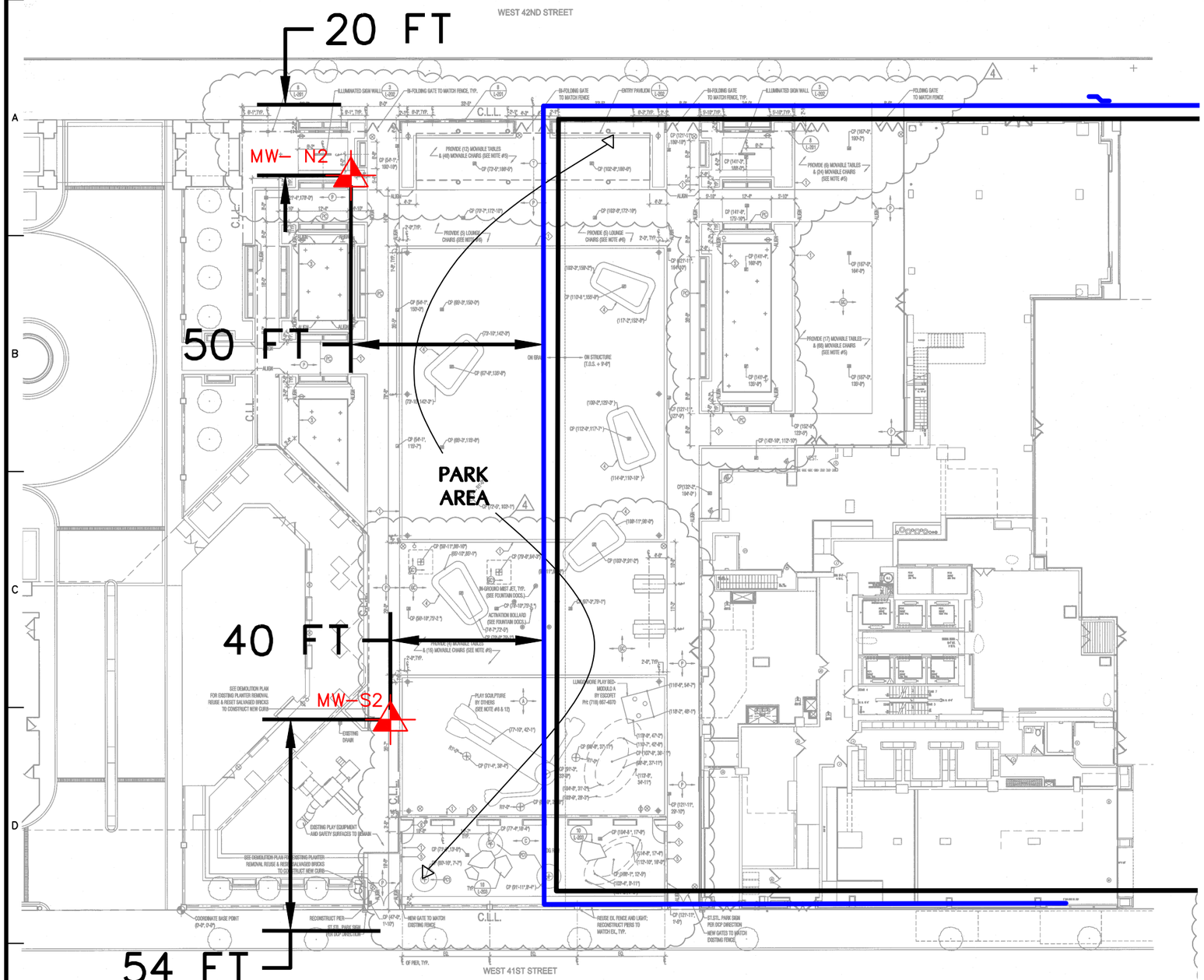
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project	RIVER PLACE I & II 650 WEST 42ND STREET NEW YORK NEW YORK
Figure Title	SITE LOCATION MAP
Project No.	170040901
Date	11/08/2016
Scale	NTS
Drawn By / Checked By	KDC / NR
Submission Date	
Figure	1
Sheet	1 of 2

Filename: \\langan.com\data\NYC\data9\170040901\Cadd Data - 170040901\Dwg\site location map.dwg Date: 11/8/2016 Time: 18:25 User: kdelcol 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)

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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 11/08/2016	
Scale NTS	
Drawn By KDC / Checked By NR	
Submission Date —	Sheet 2 of 2

Filename: \\langan.com\data\NYC\data9\170040901\Cadd Data - 170040901\Dwg\Monitoring well locations-reinstall.dwg Date: 11/8/2016 Time: 18:26 User: kdelcol Style Table: Langan.stb Layout: ANSIB-BL

ATTACHMENT A
GROUNDWATER SAMPLING FORMS

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: River Place I & II	**Well#/Location: MW-S2**	**Job 170040901**
Date: 10/14/16	**Weather: 50's &60's Sunny**	**Sampling Personnel: Joe Yanowitz**

Well Information

Sample ID	MW-S2_101416
Well Depth (ft)	-
Screened Interval (ft)	-
Casing Elevation (msl)	-
Casing Diameter (in)	2
Depth to Water (ft)	9.49
Water Elevation (msl)	-
Casing Volume (gal)	-
PID/FID Reading (ppm)	0

Purging Information

Purging Method	Low Flow
Purging Rate (gpm)	0.038
Start Purge Time	8:10
End Purge Time	8:50
Volume Purged (gal)	1.55

Sampling Information

Sampling Method	Low Flow
Start Sampling Time	9:10
End Sampling Time	9:30
Depth Before Sampling (ft)	9.91
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)**
8:10	16.03	6.95	-109	1.99	125.00	2.4	9.49	0.00
8:15	16.51	7.01	-107	2.00	77.00	2.08	-	0.25
8:20	16.78	7.02	-110	1.99	61.50	1.75	-	0.50
8:25	16.93	7.03	-114	2.01	36.50	1.5	-	0.70
8:30	16.91	7.04	-116	2.02	28.70	1.36	9.85	0.85
8:35	16.92	7.04	-120	2.03	22.40	1.25	-	1.00
8:40	17.06	7.11	-123	2.02	14.60	1.11	-	1.20
8:45	17.06	7.06	-125	2.02	10.90	0.96	-	1.40
8:50	17.06	7.06	-130	2.02	9.2	0.89	-	1.55
8:55	**Collect Sample**						9.91	1.55

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/mor 0.13 gpm

Maximum drawdown - < 0.33 feet

Water was consistently turbid with black fines

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: 10/14/16	**Weather: 50's &60's Sunny**	**Sampling Personnel: Joe Yanowitz**

Well Information

Sample ID	MW-N2_101416
Well Depth (ft)	-
Screened Interval (ft)	-
Casing Elevation (msl)	-
Casing Diameter (in)	2
Depth to Water (ft)	9.38
Water Elevation (msl)	-
Casing Volume (gal)	-
PID/FID Reading (ppm)	0

Purging Information

Purging Method	Low Flow
Purging Rate (gpm)	0.061
Start Purge Time	10:08
End Purge Time	10:53
Volume Purged (gal)	2.75

Sampling Information

Sampling Method	Low Flow
Start Sampling Time	11:00
End Sampling Time	11:10
Depth Before Sampling (ft)	9.81
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)**
10:08	14.63	7.180	-82	2.95	20.10	3.72	9.38	0.00
10:13	16.28	6.980	-95	2.80	19.60	2.33	-	0.25
10:18	16.71	6.990	-88	2.48	7.70	1.82	-	0.75
10:23	17.29	7.020	-80	2.32	5.00	1.54	-	1.15
10:28	17.136	7.020	-74	2.29	2.90	1.26	-	1.35
10:33	17.31	7.020	-71	2.36	1.90	1.06	-	1.45
10:38	17.43	7.080	-70	2.51	1.40	1.06	-	2.00
10:43	17.28	7.010	-76	2.71	2.40	0.96	9.8	2.25
10:48	17.16	6.99	-82	2.86	1.30	0.88	-	2.5
10:53	17.09	6.98	-84	3.03	1.30	0.81	-	2.75
10:58	**Collect Sample**						9.81	2.75

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/mor 0.13 gpm

Maximum drawdown - < 0.33 feet

Purged water had a yellowish tint

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

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

ANALYTICAL REPORT

Lab Number:	L1633122
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Nicole Rice
Phone:	(212) 479-5400
Project Name:	RIVER PLACE I + II
Project Number:	170040901
Report Date:	10/21/16

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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: L1633122
Report Date: 10/21/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1633122-01	MW-S2_101416	WATER	NY, NY	10/14/16 09:10	10/14/16
L1633122-02	MW-N2_101416	WATER	NY, NY	10/14/16 11:10	10/14/16
L1633122-03	DRUM_101416	WATER	NY, NY	10/14/16 11:30	10/14/16
L1633122-04	TB01_101416	WATER	NY, NY	10/14/16 00:00	10/14/16

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

Lab Number: L1633122
Report Date: 10/21/16

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:**	L1633122
Project Number:	170040901	**Report Date:**	10/21/16

Case Narrative (continued)

Report Submission

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

Semivolatile Organics

L1633122-02: The sample has elevated detection limits due to the dilution required by the sample matrix.

Cyanide, Total

The WG943227-4 MS recovery (134%), performed on L1633122-01, is outside the acceptance criteria; however, the associated LCS/LCSD recoveries are within criteria. No further action was taken.

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

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative Date: 10/21/16

ORGANICS

VOLATILES

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1633122
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-01
Client ID: MW-S2_101416
Sample Location: NY, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/21/16 17:58
Analyst: PD

Date Collected: 10/14/16 09:10
Date Received: 10/14/16
Field Prep: Not Specified

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	39		ug/l	0.50	0.16	1
Toluene	2.3	J	ug/l	2.5	0.70	1
Ethylbenzene	42		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:** L1633122

Project Number: 170040901 **Report Date:** 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-01 Date Collected: 10/14/16 09:10

Client ID: MW-S2_101416 Date Received: 10/14/16

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	4.8		ug/l	2.5	0.70	1
o-Xylene	16		ug/l	2.5	0.70	1
Xylenes, Total	21		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	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	18		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	15		ug/l	2.5	0.70	1
n-Propylbenzene	7.5		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: L1633122
Project Number: 170040901
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-01
Client ID: MW-S2_101416
Sample Location: NY, NY
Date Collected: 10/14/16 09:10
Date Received: 10/14/16
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	1.2	J	ug/l	2.0	0.70	1
p-Ethyltoluene	2.7		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	2.7		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	102		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	96		70-130

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1633122
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-02 D
Client ID: MW-N2_101416
Sample Location: NY, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/21/16 18:32
Analyst: PK

Date Collected: 10/14/16 11:10
Date Received: 10/14/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	250	70.	100
1,1-Dichloroethane	ND		ug/l	250	70.	100
Chloroform	ND		ug/l	250	70.	100
Carbon tetrachloride	ND		ug/l	50	13.	100
1,2-Dichloropropane	ND		ug/l	100	14.	100
Dibromochloromethane	ND		ug/l	50	15.	100
1,1,2-Trichloroethane	ND		ug/l	150	50.	100
Tetrachloroethene	ND		ug/l	50	18.	100
Chlorobenzene	ND		ug/l	250	70.	100
Trichlorofluoromethane	ND		ug/l	250	70.	100
1,2-Dichloroethane	ND		ug/l	50	13.	100
1,1,1-Trichloroethane	ND		ug/l	250	70.	100
Bromodichloromethane	ND		ug/l	50	19.	100
trans-1,3-Dichloropropene	ND		ug/l	50	16.	100
cis-1,3-Dichloropropene	ND		ug/l	50	14.	100
1,3-Dichloropropene, Total	ND		ug/l	50	14.	100
1,1-Dichloropropene	ND		ug/l	250	70.	100
Bromoform	ND		ug/l	200	65.	100
1,1,2,2-Tetrachloroethane	ND		ug/l	50	17.	100
Benzene	1300		ug/l	50	16.	100
Toluene	76	J	ug/l	250	70.	100
Ethylbenzene	340		ug/l	250	70.	100
Chloromethane	ND		ug/l	250	70.	100
Bromomethane	170	J	ug/l	250	70.	100
Vinyl chloride	ND		ug/l	100	7.1	100
Chloroethane	ND		ug/l	250	70.	100
1,1-Dichloroethene	ND		ug/l	50	17.	100
trans-1,2-Dichloroethene	ND		ug/l	250	70.	100
Trichloroethene	ND		ug/l	50	18.	100
1,2-Dichlorobenzene	ND		ug/l	250	70.	100

Project Name: RIVER PLACE I + II **Lab Number:** L1633122

Project Number: 170040901 **Report Date:** 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-02 D Date Collected: 10/14/16 11:10

Client ID: MW-N2_101416 Date Received: 10/14/16

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	250	70.	100
1,4-Dichlorobenzene	ND		ug/l	250	70.	100
Methyl tert butyl ether	ND		ug/l	250	70.	100
p/m-Xylene	370		ug/l	250	70.	100
o-Xylene	300		ug/l	250	70.	100
Xylenes, Total	670		ug/l	250	70.	100
cis-1,2-Dichloroethene	ND		ug/l	250	70.	100
1,2-Dichloroethene, Total	ND		ug/l	250	70.	100
Dibromomethane	ND		ug/l	500	100	100
1,2,3-Trichloropropane	ND		ug/l	250	70.	100
Acrylonitrile	ND		ug/l	500	150	100
Styrene	ND		ug/l	250	70.	100
Dichlorodifluoromethane	ND		ug/l	500	100	100
Acetone	ND		ug/l	500	150	100
Carbon disulfide	ND		ug/l	500	100	100
2-Butanone	ND		ug/l	500	190	100
Vinyl acetate	ND		ug/l	500	100	100
4-Methyl-2-pentanone	ND		ug/l	500	100	100
2-Hexanone	ND		ug/l	500	100	100
Bromochloromethane	ND		ug/l	250	70.	100
2,2-Dichloropropane	ND		ug/l	250	70.	100
1,2-Dibromoethane	ND		ug/l	200	65.	100
1,3-Dichloropropane	ND		ug/l	250	70.	100
1,1,1,2-Tetrachloroethane	ND		ug/l	250	70.	100
Bromobenzene	ND		ug/l	250	70.	100
n-Butylbenzene	ND		ug/l	250	70.	100
sec-Butylbenzene	ND		ug/l	250	70.	100
tert-Butylbenzene	ND		ug/l	250	70.	100
o-Chlorotoluene	ND		ug/l	250	70.	100
p-Chlorotoluene	ND		ug/l	250	70.	100
1,2-Dibromo-3-chloropropane	ND		ug/l	250	70.	100
Hexachlorobutadiene	ND		ug/l	250	70.	100
Isopropylbenzene	ND		ug/l	250	70.	100
p-Isopropyltoluene	ND		ug/l	250	70.	100
Naphthalene	5000		ug/l	250	70.	100
n-Propylbenzene	ND		ug/l	250	70.	100
1,2,3-Trichlorobenzene	ND		ug/l	250	70.	100
1,2,4-Trichlorobenzene	ND		ug/l	250	70.	100
1,3,5-Trimethylbenzene	ND		ug/l	250	70.	100

Project Name: RIVER PLACE I + II **Lab Number:** L1633122

Project Number: 170040901 **Report Date:** 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-02 D Date Collected: 10/14/16 11:10

Client ID: MW-N2_101416 Date Received: 10/14/16

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	140	J	ug/l	250	70.	100
1,4-Dioxane	ND		ug/l	25000	6100	100
p-Diethylbenzene	ND		ug/l	200	70.	100
p-Ethyltoluene	75	J	ug/l	200	70.	100
1,2,4,5-Tetramethylbenzene	ND		ug/l	200	54.	100
Ethyl ether	ND		ug/l	250	70.	100
trans-1,4-Dichloro-2-butene	ND		ug/l	250	70.	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	100		70-130

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1633122
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-03 D
Client ID: DRUM_101416
Sample Location: NY, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/21/16 19:06
Analyst: PK

Date Collected: 10/14/16 11:30
Date Received: 10/14/16
Field Prep: Not Specified

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	790		ug/l	12	4.0	25
Toluene	33	J	ug/l	62	18.	25
Ethylbenzene	170		ug/l	62	18.	25
Chloromethane	ND		ug/l	62	18.	25
Bromomethane	28	J	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:** L1633122

Project Number: 170040901 **Report Date:** 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-03 D Date Collected: 10/14/16 11:30

Client ID: DRUM_101416 Date Received: 10/14/16

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	150		ug/l	62	18.	25
o-Xylene	160		ug/l	62	18.	25
Xylenes, Total	310		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	2400		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	18	J	ug/l	62	18.	25

Project Name: RIVER PLACE I + II **Lab Number:** L1633122

Project Number: 170040901 **Report Date:** 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-03 D Date Collected: 10/14/16 11:30

Client ID: DRUM_101416 Date Received: 10/14/16

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	60	J	ug/l	62	18.	25
1,4-Dioxane	ND		ug/l	6200	1500	25
p-Diethylbenzene	ND		ug/l	50	18.	25
p-Ethyltoluene	ND		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	104		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	98		70-130

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1633122
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-04
Client ID: TB01_101416
Sample Location: NY, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/21/16 17:23
Analyst: PD

Date Collected: 10/14/16 00:00
Date Received: 10/14/16
Field Prep: Not Specified

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:** L1633122

Project Number: 170040901 **Report Date:** 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-04 Date Collected: 10/14/16 00:00

Client ID: TB01_101416 Date Received: 10/14/16

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	ND		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	ND		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:** L1633122

Project Number: 170040901 **Report Date:** 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-04 Date Collected: 10/14/16 00:00

Client ID: TB01_101416 Date Received: 10/14/16

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	ND		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	106		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	97		70-130

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1633122
Report Date: 10/21/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/21/16 16:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG944624-5					
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: L1633122
Report Date: 10/21/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/21/16 16:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG944624-5					
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: L1633122
Report Date: 10/21/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/21/16 16:49
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG944624-5					
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	106		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	98		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1633122

Report Date: 10/21/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG944624-3 WG944624-4								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	110		110		70-130	0		20
Chloroform	110		110		70-130	0		20
2-Chloroethylvinyl ether	100		110		70-130	10		20
Carbon tetrachloride	110		110		63-132	0		20
1,2-Dichloropropane	100		110		70-130	10		20
Dibromochloromethane	100		100		63-130	0		20
1,1,2-Trichloroethane	100		110		70-130	10		20
Tetrachloroethene	110		110		70-130	0		20
Chlorobenzene	110		110		75-130	0		20
Trichlorofluoromethane	110		110		62-150	0		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	110		110		67-130	0		20
Bromodichloromethane	110		110		67-130	0		20
trans-1,3-Dichloropropene	98		97		70-130	1		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	81		81		54-136	0		20
1,1,2,2-Tetrachloroethane	100		100		67-130	0		20
Benzene	110		110		70-130	0		20
Toluene	110		110		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1633122

Report Date: 10/21/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG944624-3 WG944624-4								
Ethylbenzene	120		120		70-130	0		20
Chloromethane	97		95		64-130	2		20
Bromomethane	**180**	Q	**200**	Q	39-139	11		20
Vinyl chloride	110		110		55-140	0		20
Chloroethane	100		110		55-138	10		20
1,1-Dichloroethene	110		110		61-145	0		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	110		110		70-130	0		20
1,2-Dichlorobenzene	100		110		70-130	10		20
1,3-Dichlorobenzene	110		110		70-130	0		20
1,4-Dichlorobenzene	110		110		70-130	0		20
Methyl tert butyl ether	110		110		63-130	0		20
p/m-Xylene	120		120		70-130	0		20
o-Xylene	115		120		70-130	4		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	98		100		64-130	2		20
Acrylonitrile	110		120		70-130	9		20
Isopropyl Ether	120		120		70-130	0		20
tert-Butyl Alcohol	116		122		70-130	5		20
Styrene	120		120		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1633122

Report Date: 10/21/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG944624-3 WG944624-4								
Dichlorodifluoromethane	110		110		36-147	0		20
Acetone	**150**	Q	120		58-148	**22**	Q	20
Carbon disulfide	100		100		51-130	0		20
2-Butanone	120		110		63-138	9		20
Vinyl acetate	100		100		70-130	0		20
4-Methyl-2-pentanone	100		100		59-130	0		20
2-Hexanone	120		120		57-130	0		20
Acrolein	100		99		40-160	1		20
Bromochloromethane	110		120		70-130	9		20
2,2-Dichloropropane	100		100		63-133	0		20
1,2-Dibromoethane	100		110		70-130	10		20
1,3-Dichloropropane	100		110		70-130	10		20
1,1,1,2-Tetrachloroethane	100		110		64-130	10		20
Bromobenzene	100		100		70-130	0		20
n-Butylbenzene	110		110		53-136	0		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	110		110		70-130	0		20
o-Chlorotoluene	100		110		70-130	10		20
p-Chlorotoluene	100		110		70-130	10		20
1,2-Dibromo-3-chloropropane	87		89		41-144	2		20
Hexachlorobutadiene	100		100		63-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1633122

Report Date: 10/21/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG944624-3 WG944624-4								
Isopropylbenzene	110		110		70-130	0		20
p-Isopropyltoluene	110		110		70-130	0		20
Naphthalene	110		120		70-130	9		20
n-Propylbenzene	110		110		69-130	0		20
1,2,3-Trichlorobenzene	110		110		70-130	0		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	110		110		64-130	0		20
1,2,4-Trimethylbenzene	110		110		70-130	0		20
Methyl Acetate	120		120		70-130	0		20
Ethyl Acetate	120		120		70-130	0		20
Cyclohexane	110		120		70-130	9		20
Ethyl-Tert-Butyl-Ether	110		110		70-130	0		20
Tertiary-Amyl Methyl Ether	110		110		66-130	0		20
1,4-Dioxane	130		130		56-162	0		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	100		110		70-130	10		20
p-Diethylbenzene	110		120		70-130	9		20
p-Ethyltoluene	110		110		70-130	0		20
1,2,4,5-Tetramethylbenzene	110		110		70-130	0		20
Tetrahydrofuran	130		120		58-130	8		20
Ethyl ether	110		110		59-134	0		20
trans-1,4-Dichloro-2-butene	98		100		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1633122

Report Date: 10/21/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG944624-3 WG944624-4								
Iodomethane	**65**	Q	75		70-130	14		20
Methyl cyclohexane	110		110		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		106		70-130
Toluene-d8	99		98		70-130
4-Bromofluorobenzene	95		93		70-130
Dibromofluoromethane	99		100		70-130

SEMIVOLATILES

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1633122
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-01
Client ID: MW-S2_101416
Sample Location: NY, NY
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 10/20/16 15:01
Analyst: RC

Date Collected: 10/14/16 09:10
Date Received: 10/14/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/18/16 17:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.66	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.67	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.73	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.73	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.71	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.84	1
2,6-Dinitrotoluene	ND		ug/l	5.0	1.1	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.62	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.73	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.70	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.63	1
Hexachlorocyclopentadiene	ND		ug/l	20	7.8	1
Isophorone	ND		ug/l	5.0	0.60	1
Nitrobenzene	ND		ug/l	2.0	0.75	1
NDPA/DPA	ND		ug/l	2.0	0.64	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.70	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	0.91	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.3	1
Di-n-butylphthalate	ND		ug/l	5.0	0.69	1
Di-n-octylphthalate	ND		ug/l	5.0	1.1	1
Diethyl phthalate	ND		ug/l	5.0	0.63	1
Dimethyl phthalate	ND		ug/l	5.0	0.65	1
Biphenyl	ND		ug/l	2.0	0.76	1
4-Chloroaniline	ND		ug/l	5.0	0.63	1
2-Nitroaniline	ND		ug/l	5.0	1.1	1
3-Nitroaniline	ND		ug/l	5.0	1.1	1
4-Nitroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	5.6		ug/l	2.0	0.66	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.67	1

Project Name: RIVER PLACE I + II
Lab Number: L1633122
Project Number: 170040901
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-01
Client ID: MW-S2_101416
Sample Location: NY, NY
Date Collected: 10/14/16 09:10
Date Received: 10/14/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acetophenone	ND		ug/l	5.0	0.85	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.68	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.62	1
2-Chlorophenol	ND		ug/l	2.0	0.63	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.77	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.6	1
2-Nitrophenol	ND		ug/l	10	1.5	1
4-Nitrophenol	ND		ug/l	10	1.8	1
2,4-Dinitrophenol	ND		ug/l	20	5.5	1
4,6-Dinitro-o-cresol	ND		ug/l	10	2.1	1
Phenol	ND		ug/l	5.0	1.9	1
2-Methylphenol	ND		ug/l	5.0	1.0	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.72	1
Benzoic Acid	ND		ug/l	50	13.	1
Benzyl Alcohol	ND		ug/l	2.0	0.72	1
Carbazole	13.		ug/l	2.0	0.63	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		21-120
Phenol-d6	34		10-120
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	75		15-120
2,4,6-Tribromophenol	87		10-120
4-Terphenyl-d14	82		41-149

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1633122
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-01
Client ID: MW-S2_101416
Sample Location: NY, NY
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 10/20/16 15:51
Analyst: YW

Date Collected: 10/14/16 09:10
Date Received: 10/14/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/18/16 17:07

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	16		ug/l	0.10	0.04	1
2-Chloronaphthalene	ND		ug/l	0.20	0.04	1
Fluoranthene	2.5		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.04	1
Naphthalene	10		ug/l	0.20	0.04	1
Benzo(a)anthracene	0.36		ug/l	0.20	0.02	1
Benzo(a)pyrene	0.48		ug/l	0.20	0.04	1
Benzo(b)fluoranthene	0.40		ug/l	0.20	0.02	1
Benzo(k)fluoranthene	0.12	J	ug/l	0.20	0.04	1
Chrysene	0.34		ug/l	0.20	0.04	1
Acenaphthylene	3.7		ug/l	0.20	0.04	1
Anthracene	1.7		ug/l	0.20	0.04	1
Benzo(ghi)perylene	0.41		ug/l	0.20	0.04	1
Fluorene	3.4		ug/l	0.20	0.04	1
Phenanthrene	0.44		ug/l	0.20	0.02	1
Dibenzo(a,h)anthracene	0.08	J	ug/l	0.20	0.04	1
Indeno(1,2,3-cd)pyrene	0.38		ug/l	0.20	0.04	1
Pyrene	2.4		ug/l	0.20	0.04	1
2-Methylnaphthalene	0.28		ug/l	0.20	0.05	1
Pentachlorophenol	ND		ug/l	0.80	0.22	1
Hexachlorobenzene	ND		ug/l	0.80	0.03	1
Hexachloroethane	ND		ug/l	0.80	0.03	1

Project Name: RIVER PLACE I + II
Lab Number: L1633122
Project Number: 170040901
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-01
Client ID: MW-S2_101416
Sample Location: NY, NY
Date Collected: 10/14/16 09:10
Date Received: 10/14/16
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	55		21-120
Phenol-d6	38		10-120
Nitrobenzene-d5	86		23-120
2-Fluorobiphenyl	102		15-120
2,4,6-Tribromophenol	117		10-120
4-Terphenyl-d14	111		41-149

Project Name: RIVER PLACE I + II
Lab Number: L1633122
Project Number: 170040901
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-02 D2
Client ID: MW-N2_101416
Sample Location: NY, NY
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 10/21/16 16:57
Analyst: KV

Date Collected: 10/14/16 11:10
Date Received: 10/14/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/18/16 17:07

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	3400		ug/l	40	8.6	200

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1633122
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-02 D
Client ID: MW-N2_101416
Sample Location: NY, NY
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 10/20/16 18:06
Analyst: RC

Date Collected: 10/14/16 11:10
Date Received: 10/14/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/18/16 17:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	25	3.3	5
Bis(2-chloroethyl)ether	ND		ug/l	10	3.3	5
1,2-Dichlorobenzene	ND		ug/l	10	3.7	5
1,3-Dichlorobenzene	ND		ug/l	10	3.7	5
1,4-Dichlorobenzene	ND		ug/l	10	3.5	5
3,3'-Dichlorobenzidine	ND		ug/l	25	7.0	5
2,4-Dinitrotoluene	ND		ug/l	25	4.2	5
2,6-Dinitrotoluene	ND		ug/l	25	5.6	5
4-Chlorophenyl phenyl ether	ND		ug/l	10	3.1	5
4-Bromophenyl phenyl ether	ND		ug/l	10	3.6	5
Bis(2-chloroisopropyl)ether	ND		ug/l	10	3.5	5
Bis(2-chloroethoxy)methane	ND		ug/l	25	3.1	5
Hexachlorocyclopentadiene	ND		ug/l	100	39.	5
Isophorone	ND		ug/l	25	3.0	5
Nitrobenzene	ND		ug/l	10	3.8	5
NDPA/DPA	ND		ug/l	10	3.2	5
n-Nitrosodi-n-propylamine	ND		ug/l	25	3.5	5
Bis(2-ethylhexyl)phthalate	ND		ug/l	15	4.6	5
Butyl benzyl phthalate	ND		ug/l	25	6.3	5
Di-n-butylphthalate	ND		ug/l	25	3.4	5
Di-n-octylphthalate	ND		ug/l	25	5.7	5
Diethyl phthalate	ND		ug/l	25	3.1	5
Dimethyl phthalate	ND		ug/l	25	3.2	5
Biphenyl	24.		ug/l	10	3.8	5
4-Chloroaniline	ND		ug/l	25	3.2	5
2-Nitroaniline	ND		ug/l	25	5.7	5
3-Nitroaniline	ND		ug/l	25	5.7	5
4-Nitroaniline	ND		ug/l	25	6.5	5
Dibenzofuran	47.		ug/l	10	3.3	5
1,2,4,5-Tetrachlorobenzene	ND		ug/l	50	3.3	5

Project Name: RIVER PLACE I + II **Lab Number:** L1633122

Project Number: 170040901 **Report Date:** 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-02 D Date Collected: 10/14/16 11:10

Client ID: MW-N2_101416 Date Received: 10/14/16

Sample Location: NY, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acetophenone	ND		ug/l	25	4.2	5
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	5
p-Chloro-m-cresol	ND		ug/l	10	3.1	5
2-Chlorophenol	ND		ug/l	10	3.2	5
2,4-Dichlorophenol	ND		ug/l	25	3.8	5
2,4-Dimethylphenol	180		ug/l	25	8.2	5
2-Nitrophenol	ND		ug/l	50	7.6	5
4-Nitrophenol	ND		ug/l	50	8.8	5
2,4-Dinitrophenol	ND		ug/l	100	27.	5
4,6-Dinitro-o-cresol	ND		ug/l	50	10.	5
Phenol	ND		ug/l	25	9.4	5
2-Methylphenol	36.		ug/l	25	5.1	5
3-Methylphenol/4-Methylphenol	42.		ug/l	25	5.6	5
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	5
Benzoic Acid	ND		ug/l	250	64.	5
Benzyl Alcohol	ND		ug/l	10	3.6	5
Carbazole	94.		ug/l	10	3.1	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		21-120
Phenol-d6	37		10-120
Nitrobenzene-d5	87		23-120
2-Fluorobiphenyl	89		15-120
2,4,6-Tribromophenol	105		10-120
4-Terphenyl-d14	101		41-149

Project Name: RIVER PLACE I + II
Lab Number: L1633122
Project Number: 170040901
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-02 D
Client ID: MW-N2_101416
Sample Location: NY, NY
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 10/20/16 21:47
Analyst: KV

Date Collected: 10/14/16 11:10
Date Received: 10/14/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/18/16 17:07

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	93		ug/l	0.50	0.18	5
2-Chloronaphthalene	ND		ug/l	1.0	0.18	5
Fluoranthene	66		ug/l	1.0	0.19	5
Hexachlorobutadiene	ND		ug/l	2.5	0.18	5
Naphthalene	1400	E	ug/l	1.0	0.22	5
Benzo(a)anthracene	23		ug/l	1.0	0.08	5
Benzo(a)pyrene	22		ug/l	1.0	0.20	5
Benzo(b)fluoranthene	26		ug/l	1.0	0.08	5
Benzo(k)fluoranthene	7.1		ug/l	1.0	0.21	5
Chrysene	16		ug/l	1.0	0.19	5
Acenaphthylene	9.3		ug/l	1.0	0.18	5
Anthracene	19		ug/l	1.0	0.18	5
Benzo(ghi)perylene	11		ug/l	1.0	0.21	5
Fluorene	44		ug/l	1.0	0.18	5
Phenanthrene	97		ug/l	1.0	0.08	5
Dibenzo(a,h)anthracene	2.6		ug/l	1.0	0.20	5
Indeno(1,2,3-cd)pyrene	10		ug/l	1.0	0.20	5
Pyrene	50		ug/l	1.0	0.20	5
2-Methylnaphthalene	83		ug/l	1.0	0.22	5
Pentachlorophenol	ND		ug/l	4.0	1.1	5
Hexachlorobenzene	ND		ug/l	4.0	0.16	5
Hexachloroethane	ND		ug/l	4.0	0.15	5

Project Name: RIVER PLACE I + II **Lab Number:** L1633122

Project Number: 170040901 **Report Date:** 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-02 D Date Collected: 10/14/16 11:10

Client ID: MW-N2_101416 Date Received: 10/14/16

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	56		21-120
Phenol-d6	40		10-120
Nitrobenzene-d5	91		23-120
2-Fluorobiphenyl	76		15-120
2,4,6-Tribromophenol	105		10-120
4-Terphenyl-d14	80		41-149

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

Lab Number: L1633122
Report Date: 10/21/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/20/16 09:42
Analyst: RC

Extraction Method: EPA 3510C
Extraction Date: 10/18/16 16:38

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG943318-1					
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	0.73
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	0.66
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: L1633122
Report Date: 10/21/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/20/16 09:42
Analyst: RC

Extraction Method: EPA 3510C
Extraction Date: 10/18/16 16:38

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG943318-1					
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	1.1
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: L1633122
Report Date: 10/21/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/20/16 09:42
Analyst: RC

Extraction Method: EPA 3510C
Extraction Date: 10/18/16 16:38

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG943318-1					
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					
No Tentatively Identified Compounds	ND		ug/l		

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		21-120
Phenol-d6	29		10-120
Nitrobenzene-d5	68		23-120
2-Fluorobiphenyl	71		15-120
2,4,6-Tribromophenol	72		10-120
4-Terphenyl-d14	79		41-149

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

Lab Number: L1633122
Report Date: 10/21/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 10/20/16 17:09
Analyst: KV

Extraction Method: EPA 3510C
Extraction Date: 10/18/16 16:48

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG943320-1					
Acenaphthene	ND		ug/l	0.10	0.04
2-Chloronaphthalene	ND		ug/l	0.20	0.04
Fluoranthene	ND		ug/l	0.20	0.04
Hexachlorobutadiene	ND		ug/l	0.50	0.04
Naphthalene	ND		ug/l	0.20	0.04
Benzo(a)anthracene	ND		ug/l	0.20	0.02
Benzo(a)pyrene	ND		ug/l	0.20	0.04
Benzo(b)fluoranthene	ND		ug/l	0.20	0.02
Benzo(k)fluoranthene	ND		ug/l	0.20	0.04
Chrysene	ND		ug/l	0.20	0.04
Acenaphthylene	ND		ug/l	0.20	0.04
Anthracene	ND		ug/l	0.20	0.04
Benzo(ghi)perylene	ND		ug/l	0.20	0.04
Fluorene	ND		ug/l	0.20	0.04
Phenanthrene	ND		ug/l	0.20	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.04
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.04
Pyrene	ND		ug/l	0.20	0.04
2-Methylnaphthalene	ND		ug/l	0.20	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: L1633122
Report Date: 10/21/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 10/20/16 17:09
Analyst: KV

Extraction Method: EPA 3510C
Extraction Date: 10/18/16 16:48

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG943320-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		21-120
Phenol-d6	36		10-120
Nitrobenzene-d5	85		23-120
2-Fluorobiphenyl	80		15-120
2,4,6-Tribromophenol	83		10-120
4-Terphenyl-d14	95		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1633122

Report Date: 10/21/16

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: WG943318-2 WG943318-3								
Acenaphthene	74		77		37-111	4		30
Benzidine	**0**	Q	**9**	Q	10-75	NC		30
1,2,4-Trichlorobenzene	75		75		39-98	0		30
Hexachlorobenzene	75		79		40-140	5		30
Bis(2-chloroethyl)ether	71		74		40-140	4		30
2-Chloronaphthalene	77		79		40-140	3		30
1,2-Dichlorobenzene	71		69		40-140	3		30
1,3-Dichlorobenzene	66		64		40-140	3		30
1,4-Dichlorobenzene	69		66		36-97	4		30
3,3'-Dichlorobenzidine	72		82		40-140	13		30
2,4-Dinitrotoluene	84		90		24-96	7		30
2,6-Dinitrotoluene	85		93		40-140	9		30
Azobenzene	78		80		40-140	3		30
Fluoranthene	80		86		40-140	7		30
4-Chlorophenyl phenyl ether	76		78		40-140	3		30
4-Bromophenyl phenyl ether	81		83		40-140	2		30
Bis(2-chloroisopropyl)ether	74		76		40-140	3		30
Bis(2-chloroethoxy)methane	79		85		40-140	7		30
Hexachlorobutadiene	72		74		40-140	3		30
Hexachlorocyclopentadiene	77		78		40-140	1		30
Hexachloroethane	67		67		40-140	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1633122

Report Date: 10/21/16

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: WG943318-2 WG943318-3								
Isophorone	80		89		40-140	11		30
Naphthalene	74		76		40-140	3		30
Nitrobenzene	80		82		40-140	2		30
NDPA/DPA	77		82		40-140	6		30
n-Nitrosodi-n-propylamine	81		85		29-132	5		30
Bis(2-ethylhexyl)phthalate	95		100		40-140	5		30
Butyl benzyl phthalate	91		100		40-140	9		30
Di-n-butylphthalate	84		91		40-140	8		30
Di-n-octylphthalate	99		106		40-140	7		30
Diethyl phthalate	80		83		40-140	4		30
Dimethyl phthalate	80		85		40-140	6		30
Benzo(a)anthracene	80		86		40-140	7		30
Benzo(a)pyrene	92		98		40-140	6		30
Benzo(b)fluoranthene	88		96		40-140	9		30
Benzo(k)fluoranthene	87		91		40-140	4		30
Chrysene	78		84		40-140	7		30
Acenaphthylene	79		84		45-123	6		30
Anthracene	78		84		40-140	7		30
Benzo(ghi)perylene	90		94		40-140	4		30
Fluorene	78		81		40-140	4		30
Phenanthrene	77		81		40-140	5		30

Lab Control Sample Analysis
Batch Quality Control

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

Lab Number: L1633122
Report Date: 10/21/16

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: WG943318-2 WG943318-3								
Dibenzo(a,h)anthracene	91		96		40-140	5		30
Indeno(1,2,3-cd)pyrene	94		99		40-140	5		30
Pyrene	79		84		26-127	6		30
Biphenyl	80		83		40-140	4		30
Aniline	**28**	Q	47		40-140	**51**	Q	30
4-Chloroaniline	58		62		40-140	7		30
1-Methylnaphthalene	76		80		41-103	5		30
2-Nitroaniline	87		93		52-143	7		30
3-Nitroaniline	73		77		25-145	5		30
4-Nitroaniline	74		83		51-143	11		30
Dibenzofuran	77		80		40-140	4		30
2-Methylnaphthalene	75		78		40-140	4		30
1,2,4,5-Tetrachlorobenzene	77		81		2-134	5		30
Acetophenone	82		88		39-129	7		30
n-Nitrosodimethylamine	39		40		22-74	3		30
2,4,6-Trichlorophenol	82		86		30-130	5		30
p-Chloro-m-cresol	83		89		23-97	7		30
2-Chlorophenol	72		76		27-123	5		30
2,4-Dichlorophenol	83		89		30-130	7		30
2,4-Dimethylphenol	46		70		30-130	**41**	Q	30
2-Nitrophenol	83		92		30-130	10		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1633122

Report Date: 10/21/16

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: WG943318-2 WG943318-3								
4-Nitrophenol	53		58		10-80	9		30
2,4-Dinitrophenol	72		78		20-130	8		30
4,6-Dinitro-o-cresol	80		87		20-164	8		30
Pentachlorophenol	82		85		9-103	4		30
Phenol	34		41		12-110	19		30
2-Methylphenol	64		73		30-130	13		30
3-Methylphenol/4-Methylphenol	60		69		30-130	14		30
2,4,5-Trichlorophenol	88		92		30-130	4		30
Benzoic Acid	40		24		10-164	**50**	Q	30
Benzyl Alcohol	68		73		26-116	7		30
Carbazole	79		84		55-144	6		30
Pyridine	**4**	Q	20		10-66	**128**	Q	30
Parathion, ethyl	86		94		40-140	9		30
Atrazine	87		92		40-140	6		30
Benzaldehyde	69		70		40-140	1		30
Caprolactam	26		28		10-130	7		30
2,3,4,6-Tetrachlorophenol	83		86		40-140	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1633122

Report Date: 10/21/16

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: WG943318-2 WG943318-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	49		52		21-120
Phenol-d6	36		41		10-120
Nitrobenzene-d5	80		82		23-120
2-Fluorobiphenyl	76		81		15-120
2,4,6-Tribromophenol	79		84		10-120
4-Terphenyl-d14	78		84		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1633122

Report Date: 10/21/16

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: WG943320-2 WG943320-3								
Acenaphthene	86		81		37-111	6		40
2-Chloronaphthalene	86		80		40-140	7		40
Fluoranthene	105		96		40-140	9		40
Hexachlorobutadiene	63		58		40-140	8		40
Naphthalene	75		69		40-140	8		40
Benzo(a)anthracene	102		95		40-140	7		40
Benzo(a)pyrene	90		84		40-140	7		40
Benzo(b)fluoranthene	89		83		40-140	7		40
Benzo(k)fluoranthene	96		88		40-140	9		40
Chrysene	92		86		40-140	7		40
Acenaphthylene	89		86		40-140	3		40
Anthracene	102		95		40-140	7		40
Benzo(ghi)perylene	99		92		40-140	7		40
Fluorene	94		88		40-140	7		40
Phenanthrene	96		88		40-140	9		40
Dibenzo(a,h)anthracene	93		87		40-140	7		40
Indeno(1,2,3-cd)pyrene	92		86		40-140	7		40
Pyrene	95		88		26-127	8		40
1-Methylnaphthalene	83		77		40-140	8		40
2-Methylnaphthalene	86		79		40-140	8		40
Pentachlorophenol	100		90		9-103	11		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1633122

Report Date: 10/21/16

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: WG943320-2 WG943320-3								
Hexachlorobenzene	91		84		40-140	8		40
Hexachloroethane	67		61		40-140	9		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	46		40		21-120
Phenol-d6	37		31		10-120
Nitrobenzene-d5	87		79		23-120
2-Fluorobiphenyl	81		74		15-120
2,4,6-Tribromophenol	86		74		10-120
4-Terphenyl-d14	102		93		41-149

METALS

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1633122
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-01
Client ID: MW-S2_101416
Sample Location: NY, NY
Matrix: Water
Date Collected: 10/14/16 09:10
Date Received: 10/14/16
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	0.359		mg/l	0.010	0.003	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Antimony, Total	ND		mg/l	0.0040	0.0004	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Arsenic, Total	0.0068		mg/l	0.0005	0.0002	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Barium, Total	0.3725		mg/l	0.0005	0.0002	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Beryllium, Total	ND		mg/l	0.0005	0.0001	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Cadmium, Total	ND		mg/l	0.0002	0.0001	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Calcium, Total	230		mg/l	2.00	0.788	20	10/20/16 10:25	10/21/16 10:21	EPA 3005A	1,6020A	AM
Chromium, Total	0.0014		mg/l	0.0010	0.0002	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Cobalt, Total	0.0028		mg/l	0.0005	0.0002	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Copper, Total	0.0032		mg/l	0.0010	0.0004	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Iron, Total	10.3		mg/l	0.050	0.019	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Lead, Total	0.0131		mg/l	0.0010	0.0003	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Magnesium, Total	91.2		mg/l	1.40	0.484	20	10/20/16 10:25	10/21/16 10:21	EPA 3005A	1,6020A	AM
Manganese, Total	0.5191		mg/l	0.0010	0.0004	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Mercury, Total	0.00012	J	mg/l	0.00020	0.00006	1	10/17/16 11:26	10/17/16 22:05	EPA 7470A	1,7470A	EA
Nickel, Total	0.0014	J	mg/l	0.0020	0.0006	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Potassium, Total	25.1		mg/l	0.100	0.031	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Selenium, Total	ND		mg/l	0.005	0.002	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Silver, Total	ND		mg/l	0.0004	0.0002	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Sodium, Total	66.7		mg/l	0.100	0.029	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Thallium, Total	ND		mg/l	0.0005	0.0001	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Vanadium, Total	0.0024	J	mg/l	0.0050	0.0016	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM
Zinc, Total	0.0058	J	mg/l	0.0100	0.0034	1	10/20/16 10:25	10/21/16 10:18	EPA 3005A	1,6020A	AM

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1633122
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-02
Client ID: MW-N2_101416
Sample Location: NY, NY
Matrix: Water
Date Collected: 10/14/16 11:10
Date Received: 10/14/16
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	0.054		mg/l	0.010	0.003	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Antimony, Total	0.0010	J	mg/l	0.0040	0.0004	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Arsenic, Total	0.0025		mg/l	0.0005	0.0002	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Barium, Total	0.4048		mg/l	0.0005	0.0002	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Beryllium, Total	ND		mg/l	0.0005	0.0001	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Cadmium, Total	ND		mg/l	0.0002	0.0001	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Calcium, Total	343		mg/l	2.00	0.788	20	10/20/16 10:25	10/21/16 11:15	EPA 3005A	1,6020A	AM
Chromium, Total	0.0006	J	mg/l	0.0010	0.0002	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Cobalt, Total	0.0070		mg/l	0.0005	0.0002	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Copper, Total	0.0010		mg/l	0.0010	0.0004	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Iron, Total	2.50		mg/l	0.050	0.019	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Lead, Total	0.0011		mg/l	0.0010	0.0003	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Magnesium, Total	84.7		mg/l	0.070	0.024	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Manganese, Total	1.071		mg/l	0.0010	0.0004	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	10/17/16 11:26	10/17/16 22:06	EPA 7470A	1,7470A	EA
Nickel, Total	0.0009	J	mg/l	0.0020	0.0006	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Potassium, Total	39.9		mg/l	0.100	0.031	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Selenium, Total	ND		mg/l	0.005	0.002	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Silver, Total	ND		mg/l	0.0004	0.0002	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Sodium, Total	222		mg/l	2.00	0.586	20	10/20/16 10:25	10/21/16 11:15	EPA 3005A	1,6020A	AM
Thallium, Total	ND		mg/l	0.0005	0.0001	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Vanadium, Total	0.0021	J	mg/l	0.0050	0.0016	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM
Zinc, Total	ND		mg/l	0.0100	0.0034	1	10/20/16 10:25	10/21/16 11:12	EPA 3005A	1,6020A	AM

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1633122
Report Date: 10/21/16

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: WG942741-1										
Mercury, Total	ND		mg/l	0.00020	0.00006	1	10/17/16 11:26	10/17/16 21:35	1,7470A	EA

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: WG944033-1										
Aluminum, Total	ND		mg/l	0.010	0.003	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Antimony, Total	ND		mg/l	0.0040	0.0004	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Arsenic, Total	ND		mg/l	0.0005	0.0002	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Barium, Total	ND		mg/l	0.0005	0.0002	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Beryllium, Total	ND		mg/l	0.0005	0.0001	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Cadmium, Total	ND		mg/l	0.0002	0.0001	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Calcium, Total	ND		mg/l	0.100	0.039	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Chromium, Total	ND		mg/l	0.0010	0.0002	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Cobalt, Total	ND		mg/l	0.0005	0.0002	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Copper, Total	ND		mg/l	0.0010	0.0004	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Iron, Total	ND		mg/l	0.050	0.019	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Lead, Total	ND		mg/l	0.0010	0.0003	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Magnesium, Total	ND		mg/l	0.070	0.024	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Manganese, Total	ND		mg/l	0.0010	0.0004	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Nickel, Total	ND		mg/l	0.0020	0.0006	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Potassium, Total	0.036	J	mg/l	0.100	0.031	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Selenium, Total	ND		mg/l	0.005	0.002	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Silver, Total	ND		mg/l	0.0004	0.0002	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Sodium, Total	ND		mg/l	0.100	0.029	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Thallium, Total	ND		mg/l	0.0005	0.0001	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Vanadium, Total	ND		mg/l	0.0050	0.0016	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM
Zinc, Total	ND		mg/l	0.0100	0.0034	1	10/20/16 10:25	10/21/16 11:50	1,6020A	AM

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1633122
Report Date: 10/21/16

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: L1633122

Report Date: 10/21/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG942741-2								
Mercury, Total	98		-		80-120	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1633122

Report Date: 10/21/16

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG944033-2					
Aluminum, Total	100	-	80-120	-	
Antimony, Total	93	-	80-120	-	
Arsenic, Total	105	-	80-120	-	
Barium, Total	98	-	80-120	-	
Beryllium, Total	107	-	80-120	-	
Cadmium, Total	100	-	80-120	-	
Calcium, Total	101	-	80-120	-	
Chromium, Total	100	-	80-120	-	
Cobalt, Total	100	-	80-120	-	
Copper, Total	104	-	80-120	-	
Iron, Total	97	-	80-120	-	
Lead, Total	98	-	80-120	-	
Magnesium, Total	101	-	80-120	-	
Manganese, Total	103	-	80-120	-	
Nickel, Total	102	-	80-120	-	
Potassium, Total	100	-	80-120	-	
Selenium, Total	105	-	80-120	-	
Silver, Total	111	-	80-120	-	
Sodium, Total	99	-	80-120	-	
Thallium, Total	96	-	80-120	-	
Vanadium, Total	103	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1633122

Report Date: 10/21/16

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG944033-2					
Zinc, Total	97	-	80-120	-	

Matrix Spike Analysis
Batch Quality Control

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

Lab Number: L1633122
Report Date: 10/21/16

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: WG942741-4 QC Sample: L1632368-02 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00511	102		-	-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

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

Lab Number: L1633122
Report Date: 10/21/16

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: WG944033-4 QC Sample: L1633127-04 Client ID: MS Sample										
Aluminum, Total	0.829	2	2.87	102		-	-	75-125	-	20
Antimony, Total	0.0017J	0.5	0.5084	102		-	-	75-125	-	20
Arsenic, Total	0.0091	0.12	0.1288	100		-	-	75-125	-	20
Barium, Total	0.3832	2	2.359	99		-	-	75-125	-	20
Beryllium, Total	ND	0.05	0.0547	109		-	-	75-125	-	20
Cadmium, Total	0.0001J	0.051	0.0523	102		-	-	75-125	-	20
Calcium, Total	124.	10	131	**70**	Q	-	-	75-125	-	20
Chromium, Total	0.0070	0.2	0.2014	97		-	-	75-125	-	20
Cobalt, Total	0.0022	0.5	0.5050	100		-	-	75-125	-	20
Copper, Total	0.0090	0.25	0.2654	102		-	-	75-125	-	20
Iron, Total	4.33	1	4.69	**36**	Q	-	-	75-125	-	20
Lead, Total	0.0117	0.51	0.5214	100		-	-	75-125	-	20
Magnesium, Total	55.5	10	59.6	**41**	Q	-	-	75-125	-	20
Manganese, Total	0.4841	0.5	0.9540	94		-	-	75-125	-	20
Nickel, Total	0.0096	0.5	0.5173	102		-	-	75-125	-	20
Potassium, Total	98.6	10	113	**144**	Q	-	-	75-125	-	20
Selenium, Total	0.003J	0.12	0.133	111		-	-	75-125	-	20
Silver, Total	ND	0.05	0.0523	105		-	-	75-125	-	20
Sodium, Total	1050	10	1040	**0**	Q	-	-	75-125	-	20
Thallium, Total	ND	0.12	0.1185	99		-	-	75-125	-	20
Vanadium, Total	0.0091	0.5	0.5100	100		-	-	75-125	-	20

Matrix Spike Analysis
Batch Quality Control

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

Lab Number: L1633122
Report Date: 10/21/16

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: WG944033-4 QC Sample: L1633127-04 Client ID: MS Sample									
Zinc, Total	0.0358	0.5	0.5079	94	-	-	75-125	-	20

Lab Duplicate Analysis
Batch Quality Control

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

Lab Number: L1633122
Report Date: 10/21/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG942741-3 QC Sample: L1632368-02 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20

Lab Duplicate Analysis
Batch Quality Control

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

Lab Number: L1633122
Report Date: 10/21/16

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG944033-3 QC Sample: L1633127-04 Client ID: DUP Sample						
Aluminum, Total	0.829	0.758	mg/l	9		20
Antimony, Total	0.0017J	0.0010J	mg/l	NC		20
Arsenic, Total	0.0091	0.0081	mg/l	12		20
Barium, Total	0.3832	0.3384	mg/l	12		20
Beryllium, Total	ND	ND	mg/l	NC		20
Cadmium, Total	0.0001J	ND	mg/l	NC		20
Chromium, Total	0.0070	0.0058	mg/l	18		20
Cobalt, Total	0.0022	0.0019	mg/l	16		20
Copper, Total	0.0090	0.0078	mg/l	15		20
Iron, Total	4.33	3.75	mg/l	14		20
Lead, Total	0.0117	0.0107	mg/l	9		20
Magnesium, Total	55.5	51.8	mg/l	7		20
Manganese, Total	0.4841	0.4393	mg/l	10		20
Nickel, Total	0.0096	0.0072	mg/l	**28**	Q	20
Selenium, Total	0.003J	0.003J	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Thallium, Total	ND	ND	mg/l	NC		20
Vanadium, Total	0.0091	0.0077	mg/l	16		20
Zinc, Total	0.0358	0.0295	mg/l	19		20

Lab Duplicate Analysis
Batch Quality Control

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

Lab Number: L1633122
Report Date: 10/21/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG944033-3 QC Sample: L1633127-04 Client ID: DUP Sample					
Calcium, Total	124.	127	mg/l	2	20
Potassium, Total	98.6	103	mg/l	4	20
Sodium, Total	1050	1080	mg/l	3	20

INORGANICS
&
MISCELLANEOUS

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

Lab Number: L1633122
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-01
Client ID: MW-S2_101416
Sample Location: NY, NY
Matrix: Water

Date Collected: 10/14/16 09:10
Date Received: 10/14/16
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	0.842		mg/l	0.025	0.009	5	10/18/16 14:20	10/19/16 15:07	1,9010C/9012B	JO
Cyanide, Physiologically Available	0.126		mg/l	0.005	0.00005	1	10/18/16 11:35	10/18/16 13:06	64,9014(M)	JO

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

Lab Number: L1633122
Report Date: 10/21/16

SAMPLE RESULTS

Lab ID: L1633122-02
Client ID: MW-N2_101416
Sample Location: NY, NY
Matrix: Water

Date Collected: 10/14/16 11:10
Date Received: 10/14/16
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	0.910		mg/l	0.025	0.009	5	10/18/16 14:20	10/19/16 15:12	1,9010C/9012B	JO
Cyanide, Physiologically Available	0.069		mg/l	0.005	0.00005	1	10/18/16 11:35	10/18/16 13:07	64,9014(M)	JO

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1633122
Report Date: 10/21/16

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: WG943085-1										
Cyanide, Physiologically Available	ND		mg/l	0.005	0.00005	1	10/18/16 11:35	10/18/16 12:46	64,9014(M)	JO
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG943227-1										
Cyanide, Total	ND		mg/l	0.005	0.001	1	10/18/16 14:20	10/19/16 14:44	1,9010C/9012B	JO

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1633122

Report Date: 10/21/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG943085-2								
Cyanide, Physiologically Available	90		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG943085-3								
Cyanide, Physiologically Available	**3**		-		0-10	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG943227-2 WG943227-3								
Cyanide, Total	105		100		85-115	5		20

Matrix Spike Analysis
Batch Quality Control

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

Lab Number: L1633122
Report Date: 10/21/16

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: WG943085-5 QC Sample: L1633079-02 Client ID: MS Sample												
Cyanide, Physiologically Available	0.001J	0.2	0.158	79		-	-		75-125	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG943227-4 WG943227-5 QC Sample: L1633122-01 Client ID: MW-S2_101416												
Cyanide, Total	0.842	0.2	1.11	**134**	Q	1.00	80		80-120	10		20

Lab Duplicate Analysis
Batch Quality Control

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

Lab Number: L1633122
Report Date: 10/21/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG943085-4 QC Sample: L1633079-01 Client ID: DUP Sample						
Cyanide, Physiologically Available	ND	0.004J	mg/l	NC		20

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

Lab Number: L1633122
Report Date: 10/21/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1633122-01A	Vial HCl preserved	A	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1633122-01B	Vial HCl preserved	A	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1633122-01C	Vial HCl preserved	A	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1633122-01D	Plastic 250ml HNO3 preserved	A	<2	3.3	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)
L1633122-01E	Plastic 250ml NaOH preserved	A	>12	3.3	Y	Absent	TCN-9010(14)
L1633122-01F	Plastic 250ml NaOH preserved	A	>12	3.3	Y	Absent	PACN(14)
L1633122-01G	Amber 1000ml unpreserved	A	7	3.3	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1633122-01H	Amber 1000ml unpreserved	A	7	3.3	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1633122-02A	Vial HCl preserved	A	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1633122-02B	Vial HCl preserved	A	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1633122-02C	Vial HCl preserved	A	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1633122-02D	Plastic 250ml HNO3 preserved	A	<2	3.3	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)
L1633122-02E	Plastic 250ml NaOH preserved	A	>12	3.3	Y	Absent	TCN-9010(14)
L1633122-02F	Plastic 250ml NaOH preserved	A	>12	3.3	Y	Absent	PACN(14)
L1633122-02G	Amber 1000ml unpreserved	A	7	3.3	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1633122-02H	Amber 1000ml unpreserved	A	7	3.3	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: L1633122
Report Date: 10/21/16

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1633122-03A	Vial HCl preserved	A	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1633122-03B	Vial HCl preserved	A	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1633122-03C	Vial HCl preserved	A	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1633122-04A	Vial HCl preserved	A	N/A	3.3	Y	Absent	NYTCL-8260(14)
L1633122-04B	Vial HCl preserved	A	N/A	3.3	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	RIVER PLACE I + II	**Lab Number:**	L1633122
Project Number:	170040901	**Report Date:**	10/21/16

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

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

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

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: DU Report with 'J' Qualifiers

Project Name:	RIVER PLACE I + II	**Lab Number:**	L1633122
Project Number:	170040901	**Report Date:**	10/21/16

Data Qualifiers

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

Project Name:	RIVER PLACE I + II	**Lab Number:**	L1633122
Project Number:	170040901	**Report Date:**	10/21/16

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, SM9222D-MF**.

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: 508-822-3288

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: 10/15/16

ALPHA Job #: L1633122

Client Information

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

Project Information

Project Name: River Place I + II
Project Location: NY NY
Project #: 170040901
(Use Project name as Project #) ☐
Project Manager: Nicole Rice
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

Billing Information

☒ Same as Client Info
PO #

Regulatory Requirement

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

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs (8260)	SVOCs (8270)	TAL Metals (6000/7000)	Total Cyanide (9010)	Available Cyanide (9014)	Total Bottle
33122 -01	MW-S2_101416	10/14/16	9:10	GW	SY	X	X	X	X	X	
-02	MW-N2_101416	"	11:10	"	"	X	X	X	X	X	
-03	Drum_101416	"	11:30	"	"	X					
-04	TB01_101416	"	—	W	—	X					

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

Sample Specific Comments

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
	10/14/16		
	10/14/16 1700		10/14/16 1340
			10/15/16 0930

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: 10/15/16

ALPHA Job #: L1688122

Client Information

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

Project Information

Project Name: River Place I + II
Project Location: NY NY
Project #: 170040901
(Use Project name as Project #)
Project Manager: Nicole Rice
ALPHAQuote #:

Turn-Around Time

Standard: X
Rush (only if pre approved):
Due Date:
# of Days:

Deliverables

- X ASP-A
- ASP-B
- EQuIS (1 File)
- EQuIS (4 File)
- X Other PDF + Excel

Billing Information

- X Same as Client Info

PO #

Regulatory Requirement

- X NY TOGS
- NY Part 375
- X AWQ Standards
- NY CP-51
- NY Restricted Use
- Other
- NY Unrestricted Use
- NYC Sewer Discharge

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:
- NJ
- X NY
- Other:

These samples have been previously analyzed by Alpha

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

- VOCs (8260)
- SVOCs (8270)
- TAL Metals (6010 / 7000)
- Total Cyanide (9012)
- Available Cyanide (9014)

Sample Filtration
- Done
- Lab to do

Preservation
- Lab to do

(Please Specify below)

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Sample Specific Comments
33122-01	MW-S2_101416	10/14/16	9:10	GW	SY	
-02	MW-N2_101416	"	11:10	"	"	
-03	Drum_101416	"	11:30	"	"	
-04	TB01_101416	"	—	W	—	

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
	10/14/16		
	10/14/16 1700		10/14/16 1340
			10/15/16 0930

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

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

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

NY Lab Id No. 11148

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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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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

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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

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

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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

Serial No.: 48542

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

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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ENVIRONMENTAL ANALYSES NON POTABLE WATER
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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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WADSWORTH CENTER

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8 WALKUP DR
WESTBOROUGH, MA 01581-1019

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

Acrylates	
Acrolein (Propenal)	EPA 8260C
Acrylonitrile	EPA 8260C
Ethyl methacrylate	EPA 8260C
Amines	
1,2-Diphenylhydrazine	EPA 8270D
2-Nitroaniline	EPA 8270D
3-Nitroaniline	EPA 8270D
4-Chloroaniline	EPA 8270D
4-Nitroaniline	EPA 8270D
Aniline	EPA 8270D
Carbazole	EPA 8270D
Benzidines	
3,3'-Dichlorobenzidine	EPA 8270D
Benzidine	EPA 8270D
Characteristic Testing	
Corrosivity	EPA 9040C
	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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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

NY Lab Id No: 11148

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

Chlorinated Hydrocarbons	
2-Chloronaphthalene	EPA 8270D
Hexachlorobenzene	EPA 8270D
Hexachlorobutadiene	EPA 8270D
Hexachlorocyclopentadiene	EPA 8270D
Hexachloroethane	EPA 8270D
Chlorophenoxy Acid Pesticides	
2,4,5-T	EPA 8151A
2,4,5-TP (Silvex)	EPA 8151A
2,4-D	EPA 8151A
Dalapon	EPA 8151A
Dicamba	EPA 8151A
Haloethers	
4-Bromophenylphenyl ether	EPA 8270D
4-Chlorophenylphenyl ether	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 8270D
Bis(2-chloroethyl)ether	EPA 8270D
Bis(2-chloroisopropyl) ether	EPA 8270D
Low Level Polynuclear Aromatic Hydrocarbons	
Acenaphthene Low Level	EPA 8270D SIM
Acenaphthylene Low Level	EPA 8270D SIM
Anthracene Low Level	EPA 8270D SIM
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

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

NY Lab Id No: 11148

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

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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WADSWORTH CENTER

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

NY Lab Id No: 11148

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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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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

NY Lab Id No: 11148

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

All approved analytes are listed below:

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

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11627

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

ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below:

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

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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:

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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ALPHA ANALYTICAL
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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ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No: 11627

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

Semi-Volatile Organics

Caprolactam	EPA 8270D
Dibenzofuran	EPA 8270D

Wastewater Metals I

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

Wastewater Metals II

Aluminum, Total	EPA 6020A
Antimony, Total	EPA 6020A
Arsenic, Total	EPA 6020A
Beryllium, Total	EPA 6020A
Mercury, Low Level	EPA 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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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
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
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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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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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:

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

Serial No.: 49078

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MANSFIELD, MA 02048

NY Lab Id No: 11627

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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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