September 4, 2015

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 2015
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 2014.

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 6, 2015 and were observed to be intact.

During the inspection, Langan was informed that sidewalk pavers located on the West 41st Street sidewalk (south of the fenced area) were recently repaired. During the repair, a fill line for an aboveground storage tank (AST) was observed, and exhibited initial stages

of corrosion. The AST associated with the fill line is located within the River Place I building. The AST fill line was located about 1.5 feet below sidewalk grade within the 4-foot clean soil cover. Soil was removed to expose and repair the line, to a distance that extended from the sidewalk to the River Place I building (about 20 feet). The soil and sidewalk pavers were then replaced.

Photographs of 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 fourth annual monitoring event on October 14, 2014. The fourth annual groundwater monitoring report is included as Attachment C. The next annual groundwater monitoring event is anticipated to occur in October 2015.

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 212-479-5404.

Kindest Regards,
Langan Engineering & Environmental Services, P.C.

Joel B. Landes, P.E.
Senior Consultant

Enclosures:

Attachment A	NYSDEC Institutional and Engineering Controls Certification Form
Attachment B	Site Cover Photographs
Attachment C	Annual Groundwater Monitoring Report- 2014

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

Attachment A

NYSDEC Institutional and Engineering Controls
Certification Forms

Enclosure 1

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: September 5, 2014 to September 5, 2015

	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.

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	Ground Water Use Restriction Landuse Restriction Site Management Plan Soil Management Plan

Box 4

Description of Engineering Controls

Parcel	Engineering Control
10890001	Subsurface Barriers

Control Description for Site No. C231024

Parcel: 10890001

Annual reports on quarterly groundwater monitoring and annual indoor air monitoring events are required as well as an annual certifcation that the ground cover is intact as well as the continued effectiveness of the newly-installed vapor barrier and that the gourndwater restrictions are still in force.

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.

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 2 and/or 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 BILL DAMATO (print name) at 250 GREENWICH ST. NY NY (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 or Remedial Party Rendering Certification — Date: 9/3/15

IC/EC CERTIFICATIONS

Box 7

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 Joel B. Landes (print name) at 21 Penn Plaza, New York, New York 10001 (print business address),

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

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

Stamp (Required for PE): STATE OF NEW YORK — JOEL B. LANDES — 076348 — LICENSED PROFESSIONAL ENGINEER

Date: 9/2/15

Attachment B

Site Cover Photographs

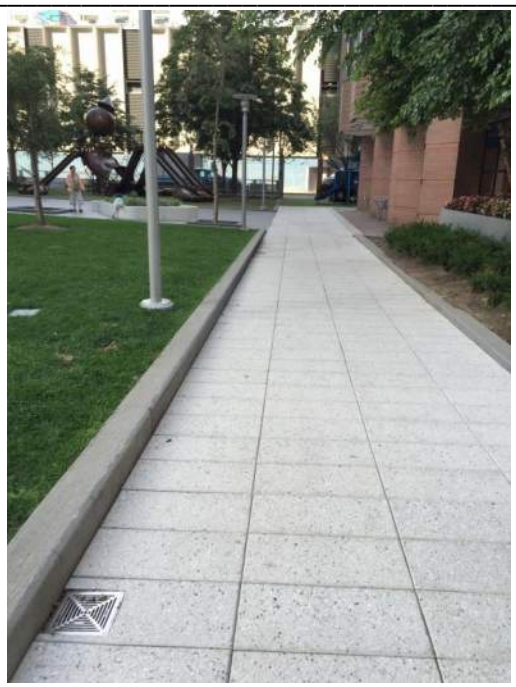

Photo 1: View of walkway at the Site.

Photo 2: View of pet area ground cover at the Site.

Photo 3: View of landscaped area at the Site.

Photo 4: View of ground cover at play area.

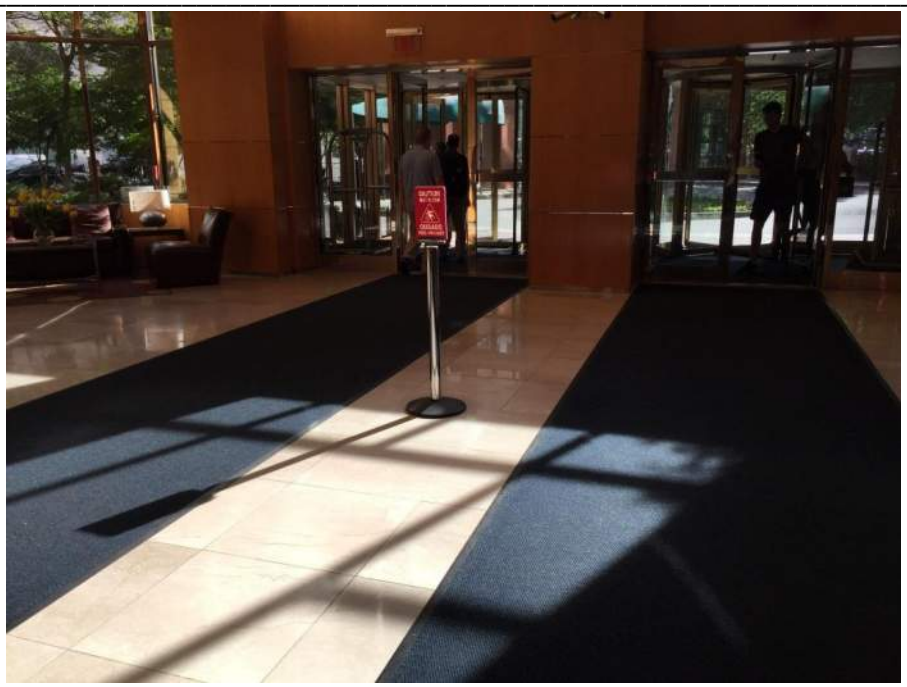

Photo 5: Surface cover in Site lobby.

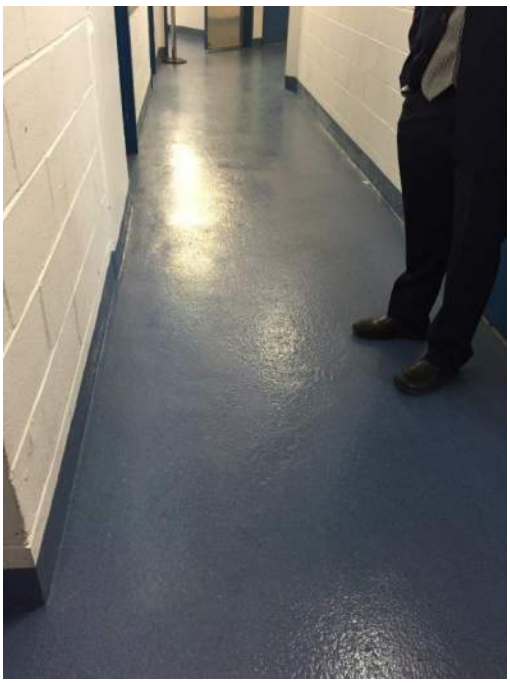

Photo 6: Typical surface cover in ground floor hallway area of Site

Photo 7: Surface cover in Site mechanical room

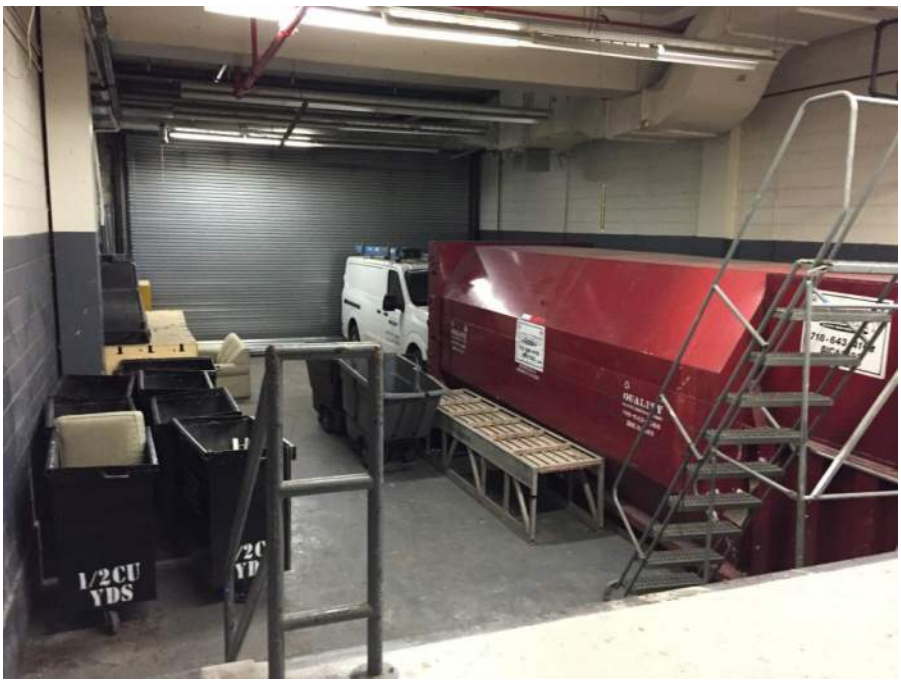

Photo 8: Surface cover in Site garbage room.

Photo 9: Surface cover in Site fire pump room.

Photo 10: Surface cover in Site gas meter room.

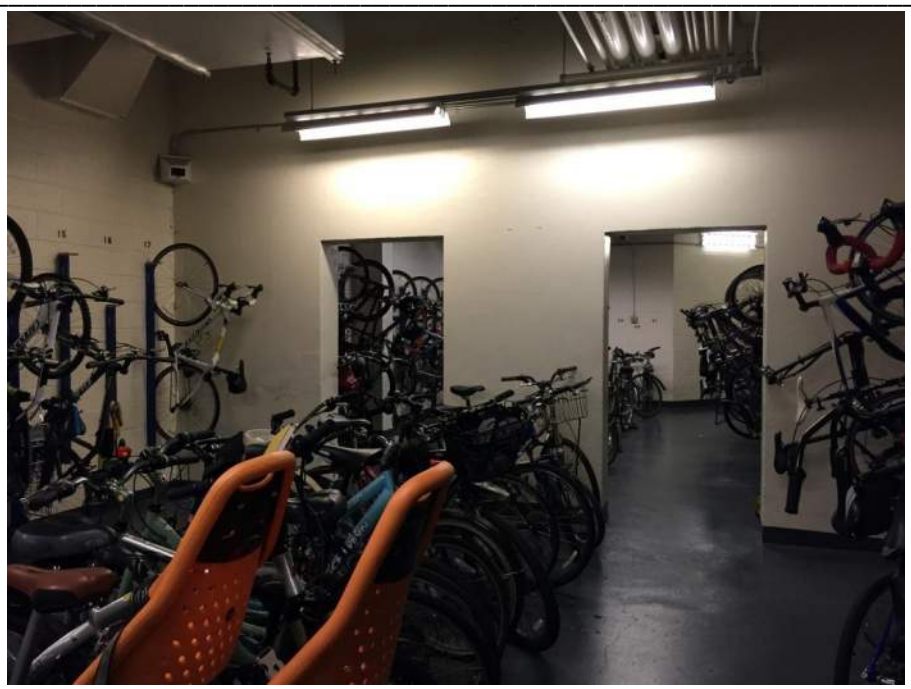

Photo 11: Surface cover in Site bicycle storage room.

Photo 12: Surface cover in oil pump room

Photo 13: Surface cover beneath Site ASTs.

Photo 14: Site bowling alley.

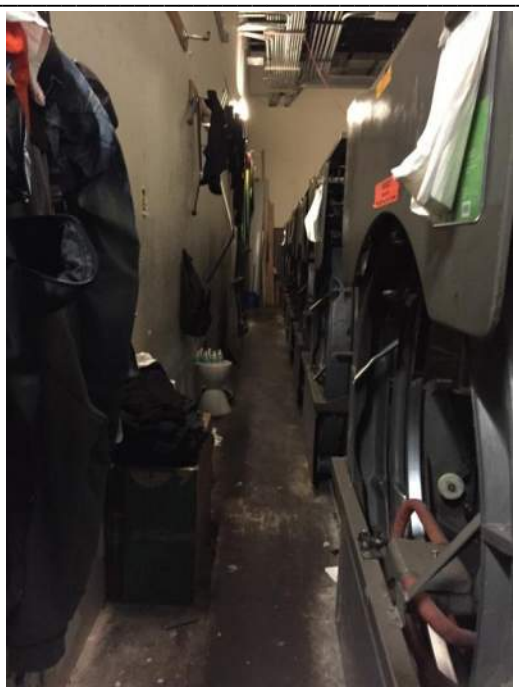

Photo 15: Site bowling alley pin set room.

Photo 16: Surface cover at vacant commercial space within Site.

Photo 17: View of typical elevator pit at the Site.

Photo 18: West 41st Street sidewalk – facing west.

Photo 19: West 42nd Street sidewalk – facing east.

Photo 20: Location of repaired pavers and AST fill line.

Photo 21: Fill port on 41st Street sidewalk.

Attachment C

Annual Groundwater Monitoring Report - 2014

November 7, 2014

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

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

Dear Mr. MacNeal:

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

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

2014 Annual Groundwater Sampling

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

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

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

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

Findings

Observations

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

Groundwater Analytical Results

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

MW-N2	
VOCs	
• 1,2,4-trimethylbenzene	• p/m-xylene
• benzene	• o-xylene
• ethylbenzene	• toluene
• naphthalene	
SVOCs	
• acenaphthene	• chrysene
• benzo(a)anthracene	• ideno(1,2,3-cd)pyrene
• benzo(b)fluoranthene	• naphthalene
• benzo(k)fluoranthene	• phenanthrene
• benzo(a)pyrene	• phenol
• biphenyl	

MW-S2	
VOCs	
• 1,2,4-trimethylbenzene	• naphthalene
• benzene	• n-propylbenzene
• ethylbenzene	• o-xylene
• isopropylbenzene	
SVOCs	
• acenaphthene	• benzo(k)fluoranthene
• benzo(a)anthracene	• chrysene
• benzo(a)pyrene	• indeno(1,2,3-cd)pyrene
• benzo(b)fluoranthene	• naphthalene

MW-N2	
Inorganics	
• cyanide	• manganese
• iron	• sodium
• magnesium	

MW-S2	
Inorganics	
• cyanide	• manganese
• iron	• mercury
• lead	• sodium
• magnesium	

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

Please contact us if you have any questions.

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

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

Enclosure(s):

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

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

TABLES

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

		Park Area Northern Well																	
		2009				2010					2011		2012		2013		2014		
		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		
LOCATION		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		
SAMPLING DATE	NYSDEC TOGS 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		
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		
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	
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	
Benzene	1	**19000**	**19000**	**17000**	**15000**	**2900**	**610**	**1100**	**2100**	**2400**	**2400**		**1600**		**1100**		**1400**		
Ethylbenzene	5	**1900**	**1900**	**1900**	**1800**	**1400**	**170**	**410**	**810**	**980**	**810**		**580**	J	**250**		**300**		
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	
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	
Naphthalene	10	**15000**	**15000**	**18000**	**19000**	**22000**	**4200**	**5400**	**12000**	**15000**	**10000**		**9200**		**3600**		**3900**		
n-Butylbenzene	5	*250*	U *250*	U *250*	U *250*	U *250*	U *50*	U *100*	U *120*	U *120*	U *100*	U	*620*	U	*250*	U	*250*	U	
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	
o-Xylene	5	**1400**	**1300**	**1400**	**1200**	**1000**	**180**	**330**	**590**	**760**	**630**		**470**	J	**230**	J	**280**		
p/m-Xylene	5	**3200**	**3100**	**3100**	**2900**	**2200**	**330**	**600**	**1100**	**1400**	**1200**		**760**		**280**		**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	
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	
Toluene	5	**4200**	**4000**	**4400**	**4100**	**740**	*75*	U *150*	U **290**	**420**	**410**		**240**	J	**90**	J	**120**	J	
SVOCs (µg/L)																			
2,4-Dimethylphenol	50	**1800**	**1800**	**830**	**1200**	**270**	*500*	U 29	**160**	10	U **230**		**150**		**89**		25		
Acenaphthene	20	**120**	**160**	**95**	**99**	**61**	**65**	**93**	**97**	**170**	**140**		**190**		**96**		**110**		
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**		
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**		
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**		
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**		
Biphenyl	5	**50**	**56**	*26*	U **36**	**72**	*250*	U **30**	**34**	**52**	**46**		**47**		**28**		**33**		
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	
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**		
Fluorene	50	**56**	**80**	**59**	47	40	U 39	**60**	*80*	U *100*	U **58**	J	**67**		29		41		
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**		
Naphthalene	10	**12000**	**14000**	**8900**	**9400**	**2200**	**2700**	**4200**	**6900**	**9100**	**6800**		**8400**		**2800**		**3000**		
Phenanthrene	50	**100**	**150**	**53**	**62**	40	**52**	**84**	*80*	U *100*	U **97**		**90**		33		**75**		
Phenol	1	**120**	**110**	**61**	**87**	*35*	U *350*	U **17**	**27**	**16**	*5*	U	*5*	U	*25*	U	**15**	J	
Total Metals																			
Arsenic, Total	25	15	17	15	15	11	6	5	11	14	**128**		7.6		6.78		4.5		
Iron, Total	300	**5300**	**2700**	**1900**	**1200**	**3500**	**4000**	**4800**	**2600**	**12000**	**3300**		**1270**		**1780**		**2870**		
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		
Magnesium, Total	35000	**70000**	**72000**	**70000**	**59000**	**83000**	**46000**	**46000**	**51000**	**86000**	**64000**		**42000**		**57700**		**63400**		
Manganese, Total	300	**1570**	**1430**	**1570**	**1340**	**746**	**603**	**632**	**528**	**816**	**582**		**542.8**		**337.5**		**470.6**		
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	
Sodium, Total	20000	**300000**	**320000**	**270000**	**250000**	**240000**	**110000**	**160000**	**200000**	**240000**	**210000**		**127000**		**175000**		**172000**		
General Chemistry																			
Cyanide, Total	200	**1100**	**1090**	**789**	**799**	**890**	**1780**	**1500**	**1060**	**1680**	**612**		126		**1210**		**1000**		

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 well locations are shown on Figure 2.

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

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

		Park Area Southern Well[6]																			
		2009				2010								2011		2012		2013		2014	
		1st Quarter		2nd Quarter		4th Quarter[7]		1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		YEAR 1		YEAR 2		YEAR 3		YEAR 4	
LOCATION		**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**	
SAMPLING DATE	**NYSDEC TOGS 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**	
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**	
VOCs (µg/L)																					
1,2,4-Trimethylbenzene	5	**76**		*25*	U	**280**		**130**		**180**		**150**		**200**		**45**		**79**		**26**		**7.2**	
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
Benzene	1	**140**		**170**		**200**		**75**		**120**		**110**		**120**		**23**		**94**		**99**		**44**	
Ethylbenzene	5	**160**		**20**		**710**		**330**		**590**		**460**		**560**		**100**		**260**		**160**		**60**	
Isopropylbenzene	5	**35**		**5.4**		**64**		**30**		**61**		**44**		**63**		**13**		**55**		**46**		**19**	
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
Naphthalene	10	**610**		**350**		**4900**		**1800**		**1700**		**1900**		**1100**		**170**		**150**		**62**		**36**	
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
n-Propylbenzene	5	**19**		5	U	**42**		*25*	U	**37**		**30**		**37**		**8.5**		**34**		**22**		**9.3**	
o-Xylene	5	**43**		**16**		**320**		**110**		**150**		**70**		*50*	U	**24**		**20**		**12**		**12**	
p/m-Xylene	5	**50**		**21**		**410**		**150**		**150**		**82**		*50*	U	**17**		**9.2**		*10*	U	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
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
Toluene	5	*19*	U	**29**		**180**		**46**		*38*	U	*38*	U	*38*	U	**8.5**		4.2	J	*10*	U	3	
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
Acenaphthene	20	14		0.2	U	*200*	U	**63**		**59**		**41**		**63**		15		**49**		**39**		**34**	
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**	
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**	
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**	
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**	
Biphenyl	5	**8.5**		*5.1*	U	**49**		*250*	U	**46**		**27**		**55**		**6.9**		**26**		**13**		*10*	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
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**	
Fluorene	50	8.9		0.2	U	*200*	U	**61**		**53**		36		42		13		33		16		6.1	
Indeno(1,2,3-cd)Pyrene	0.002	*0.2*	U	*0.2*	U	*200*	U	*10*	U	*2*	U	*10*	U	**15**		**1.8**		**3.3**		**3.1**		**2.1**	
Naphthalene	10	**300**		0.62		**11000**		**1400**		**1600**		**990**		**400**		9.3		**90**		**51**		**19**	
Phenanthrene	50	-		0.2	U	*200*	U	**120**		**74**		**52**		**63**		16		32		11		25	
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
Total Metals																					
Arsenic, Total	25	20		6		17		13		10		18		19		13		10.5		9.04		18.2	
Iron, Total	300	**21000**		**9200**		**3200**		**11000**		**5000**		**9800**		**12000**		**9900**		**12100**		**5830**		**33400**	
Lead, Total	25	**158**		**45**		17		**117**		**29**		**86**		**166**		**42**		**108.7**		**70.29**		**366.9**	
Magnesium, Total	35000	**71000**		**48000**		**120000**		**87000**		**85000**		**93000**		**84000**		**68000**		**43800**		**53800**		**95500**	
Manganese, Total	300	**598**		**403**		**327**		**636**		**430**		**492**		**558**		**537**		**574.9**		279.6		**1074**	
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**	
Sodium, Total	20000	**96000**		**100000**		**98000**		**89000**		**68000**		**76000**		**67000**		**42000**		**32600**		**49400**		**71700**	
General Chemistry																					
Cyanide, Total	200	**1920**		**1920**		**1090**		**973**		**1110**		**1540**		**1410**		**798**		152		**1030**		**1380**	

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
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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 well locations are shown on Figure 2.

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

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

		Quality Control																	
		2009								2010								2011	2012
		1st Quarter		1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		YEAR 1	YEAR 2
LOCATION		**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**
SAMPLING DATE	**NYSDEC TOGS 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**
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**
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
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
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
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
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
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
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
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
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
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
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
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
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
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
SVOCs (µg/L)																			
2,4-Dimethylphenol	50	9.6	U	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
Benzo(a)anthracene	0.002	*0.19*	U	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
Benzo(b)fluoranthene	0.002	*0.19*	U	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
Biphenyl	5	4.8	U	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
Chrysene	0.002	*0.19*	U	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
Indeno(1,2,3-cd)Pyrene	0.002	*0.19*	U	NA		NA		NA		NA		NA		NA		NA		NA		NA	NA
Naphthalene	10	0.34		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
Phenol	1	*6.7*	U	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
Iron, Total	300	50	U	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
Magnesium, Total	35000	100	U	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
Mercury, Total	0.7	0.2	U	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
General Chemistry																			
Cyanide, Total	200	5	U	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.
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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 well locations are shown on Figure 2.

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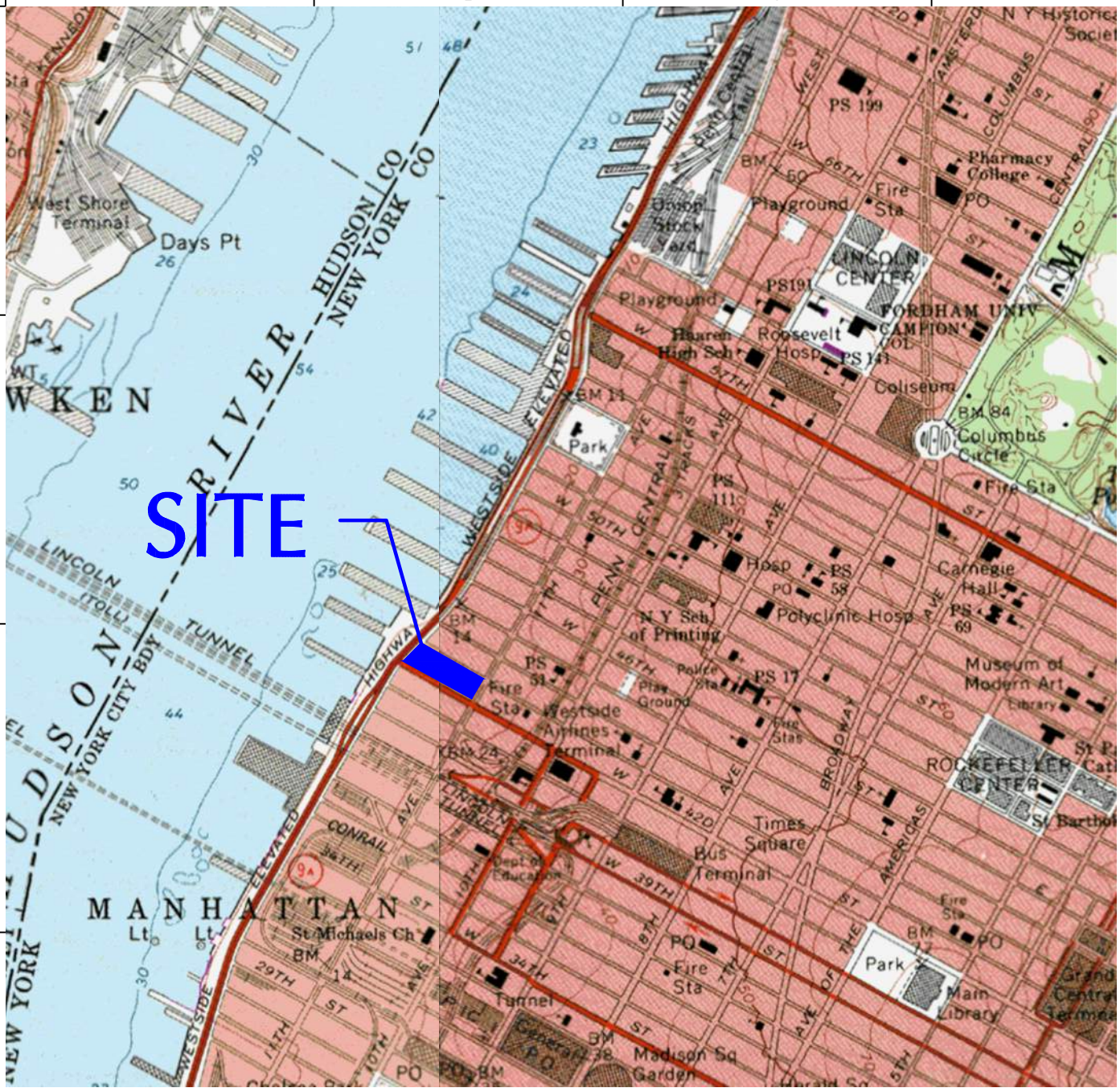
J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

FIGURES



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

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

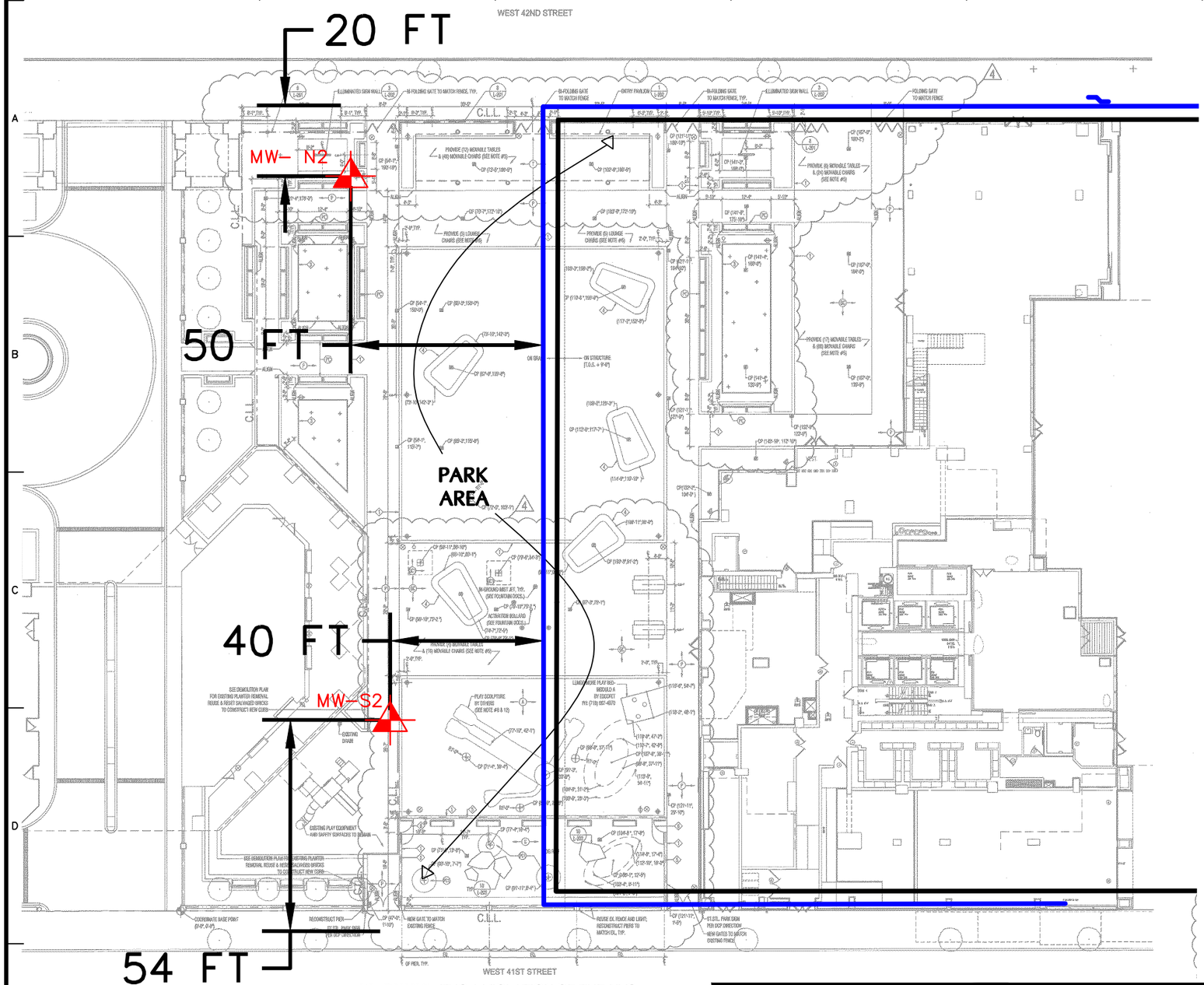
LANGAN

21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

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

Filename: \\langan.com\data\NY\data9\170040901\Cadd Data - 170040901\Dwg\site location map.dwg Date: 10/22/2014 Time: 15:08 User: mboguszewski Style Table: Langan.stb Layout: ANSIA-BP



NOTES:

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

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

LEGEND:

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

SHEET PILE WALL

PROPERTY BOUNDARY (RIVER PLACE II)

LANGAN
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

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

NJ Certificate of Authorization: 24GA27996400

Project
RIVER PLACE I & II
NEW YORK NEW YORK

Figure Title
MONITORING WELL LOCATION MAP

Project No. 170040901	Figure 2
Date 10/23/2014	
Scale NTS	
Drawn By NCR / Checked By JH	
Submission Date —	Sheet 1 of 2

Filename: \\Langan.com\data\NY\data9\170040901\Cadd Data - 170040901\Dwg\Monitoring well locations-reinstall.dwg Date: 11/13/2014 Time: 13:35 User: nrice Style Table: Langan.stb Layout: ANSIB-BL

ATTACHMENT A
GROUNDWATER SAMPLING FORMS

GROUND WATER SAMPLE FIELD INFORMATION FORM

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

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

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

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

	Parameters								
Sample Time	**pH**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Temp (°C)**	**ORP (mV)**	**Depth to Water (ft)**	**Purged Volume (gallons)**	**Notes**
8:35	***Start Purging***								
8:42	6.55	3.17	30.5	5.74	18.73	80	9.68	~1	
8:52	7.27	2.98	46.8	4.10	18.42	-44	9.70	~2	
9:02	7.32	2.65	12.3	2.87	18.62	-56	9.75	~3	
9:12	7.34	2.66	9.1	2.57	18.61	-62	9.75	~4	
9:22	7.33	2.68	6.9	1.97	18.67	-72	9.76	~5	
9:32	7.34	2.70	4.4	1.95	18.66	-76	9.78	~6	
9:42	7.35	2.72	3.4	1.93	18.68	-78	9.77	~7	
9:52	7.35	2.74	3.70	1.91	18.69	-78	9.78	~8	
	Collect Sample								

Notes/Remarks

8:00-8:35 pump/generator troubleshooting

GROUND WATER SAMPLE FIELD INFORMATION FORM

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

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

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

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

	Parameters								
Sample Time	**pH**	**Conductivity (mS/cm)**	**Turbidity (NTU)**	**Dissolved Oxygen (mg/L)**	**Temp (◦C)**	**ORP (mV)**	**Depth to Water (ft)**	**Purged Volume (gallons)**	**Notes**
10:30	***Start Purging Well***								
10:40	8.07	7.70	234	3.98	19.73	-87	9.75	0.5	
10:50	7.41	7.68	443	2.30	19.33	-107	9.85	~1	
11:00	7.37	7.68	>1000	1.06	19.21	-115	9.90	~2	
11:10	7.47	1.67	>1000	1.00	19.03	-106	10.02	~3	
11:20	7.31	1.67	>1000*	6.00	19.33	-111	10.05	~4	
11:30	7.34	1.69	>1000	5.01	19.66	-116	10.14	~5	
11:40	7.32	7.71	>1000	4.39	19.84	-112	10.20	~6	
11:50	7.34	7.73	>1000	3.65	19.43	-115	10.28	~7	
12:00	7.24	1.76	>1000	0.66	19.67	-107	10.35	~8	
12:10	7.30	1.78	>1000	0.37	19.77	-116	10.40	~9	
12:20	7.31	1.79	884	0.32	19.80	-115	10.40	~10	
12:30	7.32	1.81	882	0.36	19.82	-116	10.35	~11	
12:40	7.31	1.80	680	0.35	19.83	-117	10.37	~12	
12:50	7.31	1.81	810	0.33	19.83	-116	10.40	~13	
12:55	7.31	1.82	890	0.31	19.82	-115	10.40	~14	
Collect Sample									

Notes/Remarks

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

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

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

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

ANALYTICAL REPORT

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

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

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

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

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

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

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

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

Case Narrative

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

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

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

Please see the associated 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:**	L1424443
Project Number:	170040901	**Report Date:**	10/23/14

Case Narrative (continued)

Report Submission

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

Sample Receipt

Sample "TB01_101414" was not received.

Semivolatile Organics

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

Semivolatile Organics by SIM

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

Metals

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

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

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

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

Project Name:	RIVER PLACE I + II	**Lab Number:**	L1424443
Project Number:	170040901	**Report Date:**	10/23/14

Case Narrative (continued)

for the laboratory duplicate.

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

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative Date: 10/23/14

ORGANICS

VOLATILES

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-01 D
Client ID: MW-N2_101414
Sample Location: 650 WEST 42ND STREET
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/19/14 18:32
Analyst: PD

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

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

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-01 D Date Collected: 10/14/14 09:55

Client ID: MW-N2_101414 Date Received: 10/15/14

Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified

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

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-01 D Date Collected: 10/14/14 09:55

Client ID: MW-N2_101414 Date Received: 10/15/14

Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified

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

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

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1424443
Report Date: 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-02
Client ID: MW-S2_101414
Sample Location: 650 WEST 42ND STREET
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/19/14 19:06
Analyst: PD

Date Collected: 10/14/14 12:55
Date Received: 10/15/14
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	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	44		ug/l	0.50	0.16	1
Toluene	3.0		ug/l	2.5	0.70	1
Ethylbenzene	60		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.19	J	ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-02 Date Collected: 10/14/14 12:55

Client ID: MW-S2_101414 Date Received: 10/15/14

Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	4.8		ug/l	2.5	0.70	1
o-Xylene	12		ug/l	2.5	0.70	1
Xylenes, Total	17		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	1.1	J	ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	0.77	J	ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	19		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	36		ug/l	2.5	0.70	1
n-Propylbenzene	9.3		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-02 Date Collected: 10/14/14 12:55

Client ID: MW-S2_101414 Date Received: 10/15/14

Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified

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

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

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-03 D
Client ID: WW01_101414
Sample Location: 650 WEST 42ND STREET
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/19/14 19:40
Analyst: PD

Date Collected: 10/14/14 13:10
Date Received: 10/15/14
Field Prep: Not Specified

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

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-03 D Date Collected: 10/14/14 13:10

Client ID: WW01_101414 Date Received: 10/15/14

Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	25	7.0	10
1,4-Dichlorobenzene	ND		ug/l	25	7.0	10
Methyl tert butyl ether	ND		ug/l	25	7.0	10
p/m-Xylene	51		ug/l	25	7.0	10
o-Xylene	46		ug/l	25	7.0	10
Xylenes, Total	97		ug/l	25	7.0	10
cis-1,2-Dichloroethene	ND		ug/l	25	7.0	10
1,2-Dichloroethene, Total	ND		ug/l	25	7.0	10
Dibromomethane	ND		ug/l	50	10.	10
1,2,3-Trichloropropane	ND		ug/l	25	7.0	10
Acrylonitrile	ND		ug/l	50	15.	10
Styrene	ND		ug/l	25	7.0	10
Dichlorodifluoromethane	ND		ug/l	50	10.	10
Acetone	ND		ug/l	50	15.	10
Carbon disulfide	ND		ug/l	50	10.	10
2-Butanone	ND		ug/l	50	19.	10
Vinyl acetate	ND		ug/l	50	10.	10
4-Methyl-2-pentanone	ND		ug/l	50	10.	10
2-Hexanone	ND		ug/l	50	10.	10
Bromochloromethane	ND		ug/l	25	7.0	10
2,2-Dichloropropane	ND		ug/l	25	7.0	10
1,2-Dibromoethane	ND		ug/l	20	6.5	10
1,3-Dichloropropane	ND		ug/l	25	7.0	10
1,1,1,2-Tetrachloroethane	ND		ug/l	25	7.0	10
Bromobenzene	ND		ug/l	25	7.0	10
n-Butylbenzene	ND		ug/l	25	7.0	10
sec-Butylbenzene	ND		ug/l	25	7.0	10
tert-Butylbenzene	ND		ug/l	25	7.0	10
o-Chlorotoluene	ND		ug/l	25	7.0	10
p-Chlorotoluene	ND		ug/l	25	7.0	10
1,2-Dibromo-3-chloropropane	ND		ug/l	25	7.0	10
Hexachlorobutadiene	ND		ug/l	25	7.0	10
Isopropylbenzene	12	J	ug/l	25	7.0	10
p-Isopropyltoluene	ND		ug/l	25	7.0	10
Naphthalene	570		ug/l	25	7.0	10
n-Propylbenzene	ND		ug/l	25	7.0	10
1,2,3-Trichlorobenzene	ND		ug/l	25	7.0	10
1,2,4-Trichlorobenzene	ND		ug/l	25	7.0	10
1,3,5-Trimethylbenzene	ND		ug/l	25	7.0	10

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-03 D Date Collected: 10/14/14 13:10

Client ID: WW01_101414 Date Received: 10/15/14

Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified

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

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

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

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

Method Blank Analysis
Batch Quality Control

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

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

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

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

Method Blank Analysis
Batch Quality Control

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

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

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

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

Method Blank Analysis
Batch Quality Control

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

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

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis
Batch Quality Control

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

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

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

Lab Control Sample Analysis
Batch Quality Control

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

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

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

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

Report Date: 10/23/14

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

Lab Control Sample Analysis
Batch Quality Control

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

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

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

Lab Control Sample Analysis
Batch Quality Control

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

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

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

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

Report Date: 10/23/14

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

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

SEMIVOLATILES

Project Name: RIVER PLACE I + II
Lab Number: L1424443
Project Number: 170040901
Report Date: 10/23/14

SAMPLE RESULTS

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

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

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

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

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

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

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-01 D Date Collected: 10/14/14 09:55

Client ID: MW-N2_101414 Date Received: 10/15/14

Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified

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

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

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-01 D
Client ID: MW-N2_101414
Sample Location: 650 WEST 42ND STREET
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 10/22/14 10:06
Analyst: MW

Date Collected: 10/14/14 09:55
Date Received: 10/15/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/18/14 11:41

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

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-01 D Date Collected: 10/14/14 09:55

Client ID: MW-N2_101414 Date Received: 10/15/14

Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

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

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

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

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

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

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-02 D Date Collected: 10/14/14 12:55

Client ID: MW-S2_101414 Date Received: 10/15/14

Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified

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

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

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-02 D
Client ID: MW-S2_101414
Sample Location: 650 WEST 42ND STREET
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 10/22/14 13:00
Analyst: MW

Date Collected: 10/14/14 12:55
Date Received: 10/15/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/18/14 11:41

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

Project Name: RIVER PLACE I + II **Lab Number:** L1424443

Project Number: 170040901 **Report Date:** 10/23/14

SAMPLE RESULTS

Lab ID: L1424443-02 D Date Collected: 10/14/14 12:55

Client ID: MW-S2_101414 Date Received: 10/15/14

Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

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

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

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

Method Blank Analysis
Batch Quality Control

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

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

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

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

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

Method Blank Analysis
Batch Quality Control

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

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

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

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

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

Method Blank Analysis
Batch Quality Control

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

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

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

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

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

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

Method Blank Analysis
Batch Quality Control

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

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

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

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

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

Method Blank Analysis
Batch Quality Control

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

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

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

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

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

Report Date: 10/23/14

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

Lab Control Sample Analysis
Batch Quality Control

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

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

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

Lab Control Sample Analysis
Batch Quality Control

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

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

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

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

Report Date: 10/23/14

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

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

Lab Control Sample Analysis
Batch Quality Control

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

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

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

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

Report Date: 10/23/14

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

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

METALS

Project Name: RIVER PLACE I + II
Lab Number: L1424443
Project Number: 170040901
Report Date: 10/23/14

SAMPLE RESULTS

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

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

Project Name: RIVER PLACE I + II
Lab Number: L1424443
Project Number: 170040901
Report Date: 10/23/14

SAMPLE RESULTS

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

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

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

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis
Batch Quality Control

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

Prep Information

Digestion Method: EPA 7470A

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

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

Report Date: 10/23/14

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

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

Report Date: 10/23/14

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

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

Report Date: 10/23/14

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

Matrix Spike Analysis
Batch Quality Control

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

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

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

Matrix Spike Analysis
Batch Quality Control

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

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

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

Matrix Spike Analysis
Batch Quality Control

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

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

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

Lab Duplicate Analysis
Batch Quality Control

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

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

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

Lab Duplicate Analysis
Batch Quality Control

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

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

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

Lab Duplicate Analysis
Batch Quality Control

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

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

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

INORGANICS
&
MISCELLANEOUS

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

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

SAMPLE RESULTS

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

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

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

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

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

SAMPLE RESULTS

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

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

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

Project Name: RIVER PLACE I + II
Project Number: 170040901
Lab Number: L1424443
Report Date: 10/23/14

Method Blank Analysis
Batch Quality Control

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

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

Report Date: 10/23/14

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

Matrix Spike Analysis
Batch Quality Control

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

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

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

Lab Duplicate Analysis
Batch Quality Control

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

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

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

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

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

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

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

*Values in parentheses indicate holding time in days

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

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

Container Information

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

*Values in parentheses indicate holding time in days

Project Name:	RIVER PLACE I + II	**Lab Number:**	L1424443
Project Number:	170040901	**Report Date:**	10/23/14

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

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

Terms

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

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

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

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

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

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

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

Report Format: DU Report with 'J' Qualifiers

Project Name:	RIVER PLACE I + II	**Lab Number:**	L1424443
Project Number:	170040901	**Report Date:**	10/23/14

Data Qualifiers

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

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

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

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

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

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

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard 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:**	L1424443
Project Number:	170040901	**Report Date:**	10/23/14

REFERENCES

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

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

LIMITATION OF LIABILITIES

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

Last revised April 15, 2014

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

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

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

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

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

Serial_No:10231410:40

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 10/15/14

ALPHA Job #: L1424443

Client Information

Client: LANGAN
Address: 360 West 31st Street
NY, NY 10001
Phone: 212-479-5400
Fax: 212-479-5444
Email: nrocha@langan.com

☑ These samples have been previously analyzed by Alpha

Project Information

Project Name: River Place T x T
Project Location: 650 West 42nd Street
Project #: 170040901
Project Manager: Nicole Rocha
ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: Time:

Year ago due 10/8/2013

Report Information - Data Deliverables

☐ FAX ☑ EMAIL
☑ ADEx ☑ Add'l Deliverables

Billing Information

☑ Same as Client info PO #: 170040901

Regulatory Requirements/Report Limits

State /Fed Program: Criteria: TOGS

Other Project Specific Requirements/Comments/Detection Limits:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TAL Metals	TCL VOC	TCL SVOC	CN	PHCN	Sample Specific Comments	TOTAL # BOTTLES
24443-01	MW-N2_101414	10/14/14	0955	GW	MB	1	3	2	1	1	Total 8 containers	
02	MW-S2_101414	10/14/14	1255	GW	MB	1	3	2	1	1	Total 8 containers	
03	WW01_101414	10/14/14	1310	WW	MB		3				Total 3 containers	
04	TB01_101414	10/14/14	—	DI			1				Total 1 containers	

SAMPLE HANDLING

Filtration
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Container Type	P	V	A	P	P
Preservative	C	B	A	E	E

WW - Waste water / purged water

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

Relinquished By:	Date/Time	Received By:	Date/Time
	10/15/14 8:48		10-15-14 848
Tom Toher	10-15-14 1840	Tom Toher	10-15-14 1840
Tom Toher	10-15-14 2305		10/15/14 2305

FORM NO: 01-01 (rev. 14-OCT-07)

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)

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

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All approved analytes are listed below:

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

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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		**Polynuclear Aromatics**	
PCB-1016	EPA 8082A	Benzo(a)pyrene	EPA 8270D
PCB-1221	EPA 608	Benzo(b)fluoranthene	EPA 625
	EPA 8082A		EPA 8270D
PCB-1232	EPA 608	Benzo(ghi)perylene	EPA 625
	EPA 8082A		EPA 8270D
PCB-1242	EPA 608	Benzo(k)fluoranthene	EPA 625
	EPA 8082A		EPA 8270D
PCB-1248	EPA 608	Chrysene	EPA 625
	EPA 8082A		EPA 8270D
PCB-1254	EPA 608	Dibenzo(a,h)anthracene	EPA 625
	EPA 8082A		EPA 8270D
PCB-1260	EPA 608	Fluoranthene	EPA 625
	EPA 8082A		EPA 8270D
PCB-1262	EPA 8082A	Fluorene	EPA 625
PCB-1268	EPA 8082A		EPA 8270D
Polynuclear Aromatics		Indeno(1,2,3-cd)pyrene	EPA 625
Acenaphthene	EPA 625		EPA 8270D
	EPA 8270D	Naphthalene	EPA 625
Acenaphthylene	EPA 625		EPA 8270D
	EPA 8270D	Phenanthrene	EPA 625
Anthracene	EPA 625		EPA 8270D
	EPA 8270D	Pyrene	EPA 625
Benzo(a)anthracene	EPA 625		EPA 8270D
	EPA 8270D	**Priority Pollutant Phenols**	
Benzo(a)pyrene	EPA 625	2,3,4,6 Tetrachlorophenol	EPA 8270D

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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:

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

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

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

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Volatiles Organics	
Vinyl acetate	EPA 8260C
Wastewater Metals I	
Barium, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A
Cadmium, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A
Calcium, Total	EPA 200.7 Rev. 4.4 EPA 6010C
Chromium, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A
Copper, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A
Iron, Total	EPA 200.7 Rev. 4.4 EPA 6010C EPA 6020A
Lead, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4
Wastewater Metals I	
Lead, Total	EPA 6010C EPA 6020A
Magnesium, Total	EPA 200.7 Rev. 4.4 EPA 6010C
Manganese, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A
Nickel, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A
Potassium, Total	EPA 200.7 Rev. 4.4 EPA 6010C
Silver, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A
Sodium, Total	EPA 200.7 Rev. 4.4 EPA 6010C
Wastewater Metals II	
Aluminum, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A

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Wastewater Metals II	
Antimony, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A
Arsenic, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A
Beryllium, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A
Chromium VI	EPA 7196A SM 18-19 3500-Cr D
Mercury, Total	EPA 245.1 Rev. 3.0 EPA 7470A
Selenium, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A
Vanadium, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A
Zinc, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4
Wastewater Metals II	
Zinc, Total	EPA 6010C EPA 6020A
Wastewater Metals III	
Cobalt, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A
Molybdenum, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A
Thallium, Total	EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 6010C EPA 6020A
Tin, Total	EPA 200.7 Rev. 4.4 EPA 6010C
Titanium, Total	EPA 200.7 Rev. 4.4
Wastewater Miscellaneous	
Boron, Total	EPA 200.7 Rev. 4.4 EPA 6010C
Bromide	EPA 300.0 Rev. 2.1
Color	SM 18-21 2120B (01)
Cyanide, Total	SM 18-21 4500-CN E (99)
Formaldehyde	EPA 8315A

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

Wastewater Miscellaneous

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

Sample Preparation Methods

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

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

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

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

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

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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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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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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

Serial No.: 48543

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

Volatile Aromatics	
n-Propylbenzene	EPA 8260C
p-Isopropyltoluene (P-Cymene)	EPA 8260C
sec-Butylbenzene	EPA 8260C
Styrene	EPA 8260C
tert-Butylbenzene	EPA 8260C
Toluene	EPA 8260C
Total Xylenes	EPA 8260C
Volatile Halocarbons	
1,1,1,2-Tetrachloroethane	EPA 8260C
1,1,1-Trichloroethane	EPA 8260C
1,1,2,2-Tetrachloroethane	EPA 8260C
1,1,2-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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WADSWORTH CENTER

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ALPHA ANALYTICAL
8 WALKUP DR
WESTBOROUGH, MA 01581-1019

NY Lab Id No: 11148

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

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

NY Lab Id No: 11627

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

ENVIRONMENTAL ANALYSES 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
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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320 FORBES BOULEVARD
MANSFIELD, MA 02048

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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 3015D
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

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

Polychlorinated Biphenyls

PCB-1221	EPA 8082A
PCB-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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MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No: 11627

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

Semi-Volatile Organics

Caprolactam	EPA 8270D
Dibenzofuran	EPA 8270D

Wastewater Metals I

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

Wastewater Metals II

Aluminum, Total	EPA 6020A
Antimony, Total	EPA 6020A
Arsenic, Total	EPA 6020A
Beryllium, Total	EPA 6020A
Mercury, Low Level	EPA 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

Serial No.: 40076

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MANSFIELD, MA 02048

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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

Serial No.: 49077

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11627

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

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

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ENVIRONMENTAL ANALYSES AIR AND EMISSIONS

All approved analytes are listed below:

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

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