September 15, 2016

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 2016
West 42nd Street – River Place II
West 41st – West 42nd Streets
New York, New York 110036
NYSDEC BCP Site No. C231012
Langan Project No.: 170040901

Dear Mr. MacNeal:

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

The following is an update on the status of the requirements of the SMP for the Site including: 1) institutional control/engineering controls (IC/EC), 2) groundwater monitoring, and 3) ongoing repair of the vapor/water barrier. The last round of indoor air sampling was conducted on December 22, 2011. According to correspondence between Mr. MacNeal of the New York State Department of Environmental Conservation (NYSDEC) and Langan dated August 31, 2011, indoor air sampling was discontinued after the December 2011 sampling event.

Langan prepared a Corrective Measures Work Plan (CMWP) dated December 5, 2014 to address water intrusion observed in the boiler room and oil tank room in the sub-cellar of the site building during Langan's annual site-wide SMP inspection on August 12, 2014. The CMWP also provided a summary and results of the indoor air quality evaluation performed by GCI Environmental Advisory, Inc (GCI), which was performed to determine if soil vapors were accumulating in the site building.

In accordance with the CMWP, CANY Technical Services, LLC (CANY) performed an assessment of the water intrusion condition and prepared survey plans dated April 30, 2015. As part of the annual site-wide SMP inspection, Langan performed a site walk on August 6, 2015 and documented the location and water intrusion conditions. CANY retained CGI Northeast (CGI) to complete corrective measures during the weeks of October 19 and 26, 2015, which included the following:

- Concrete gel injection at active water intrusion locations;
- Perimeter crack remediation at floor-to-wall transition cold joints;

- Removal of abandoned injection ports; and
- Patching with hydraulic cement within the area of active water intrusion locations.

Langan performed a confirmatory site walk on December 2, 2015. No active water intrusion was observed. A summary of observations and corrective measures performed is provided in the January 29, 2016 Corrective Measures Implementation memorandum.

Institutional Control/Engineering Controls (IC/EC) Inspection

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

Cover System – The site cover system includes the building foundation slabs, asphalt parking lots, concrete walkways, and top soil used in landscaped areas. The construction of the cover system is complete. Both building slabs and the park portion between the buildings were inspected by Langan on August 23, 2016 and were observed to be intact. Photographs of site cover are provided as Attachment B.

Inspection of Vapor/Water Barrier – Langan inspected the vapor/water barrier at River Place II on August 23, 2016. Groundwater intrusion was observed at one location on the sub cellar wall of the fire pump room and staining and seepage was observed around the intrusion. On August 30, 2016 CGI Northeast (CGI) completed corrective measures in accordance with the December 5, 2014 CMWP to prevent further infiltration of groundwater into the site. Corrective measures included concrete gel injection and patching with hydraulic cement. A visual inspection of the sub cellar area following remediation was conducted on August 31, 2016. No water intrusion was observed. The repairs will be visually inspected again in six months and during the annual inspection of the site cover system.

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 between RP I and RP II. Langan performed the fifth annual monitoring event on October 16, 2015. The fifth annual groundwater monitoring report is included as Attachment C. The next annual groundwater monitoring event is anticipated to occur in October 2016.

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.

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.

Ryan Manderbach, CHMM
Senior Project Manager

Enclosures:

Attachment A	NYSDEC Institutional and Engineering Controls Certification Form
Attachment B	Site Cover Photographs
Attachment C	Annual Groundwater Monitoring Report - 2015

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

Attachment A
NYSDEC Institutional and Engineering Controls Certification Form

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. **C231012**

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

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

Reporting Period: September 19, 2014 to August 16, 2016

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

Box 2

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

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

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

Signature of Owner, Remedial Party or Designated Representative Date

Box 2A

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

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

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

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

SITE NO. C231012

Box 3

Description of Institutional Controls

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

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

Box 4

Description of Engineering Controls

Parcel	Engineering Control
10890003	Vapor Mitigation Cover System Subsurface Barriers

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

Box 5

Periodic Review Report (PRR) Certification Statements

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

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

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

YES	NO
☑	☐

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

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

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

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

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

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

YES	NO
☑	☐

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

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

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. C231012

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

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

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

am certifying as Remedial Party (Owner or Remedial Party)

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

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

8/23/16
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

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

I Joel B Landes at 21 Penn Plaza NYNY 10001.
print name print business address

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

STATE OF NEW YORK
JOEL B. LANDES
076348
LICENSED PROFESSIONAL ENGINEER

Joel B Landes 9/5/16

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

Stamp (Required for PE)

Date

Attachment B
Site Cover Photographs

Photo 1: Surface cover in the sub-cellar level.

Photo 2: Grout injection locations on the wall of the sub-cellar level.

Photo 3: Seepage on the wall of the sub-cellar level on August 23, 2016.

Photo 4: Repaired wall of the sub-cellar level on August 31, 2016.

Photo 5: Surface cover in Site compactor room.

Photo 6: Typical ground cover in the Site hallway.

Photo 7: Typical surface cover in Site storage areas.

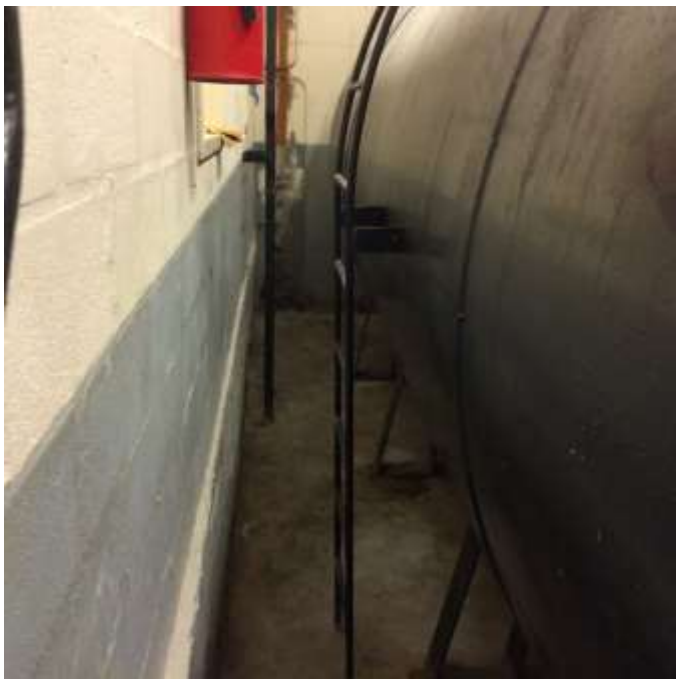


Photo 8: Surface cover beneath the AST.

Photo 9: Surface cover in Site laundry room.

Photo 10: Surface cover and wall grout injections in Site boiler room.

Photo 11: Surface cover in Site garage.

Photo 12: Surface cover in Site fire pump room.

Photo 13: Surface cover in Site mechanical room.

Photo 14: River Place – facing south.

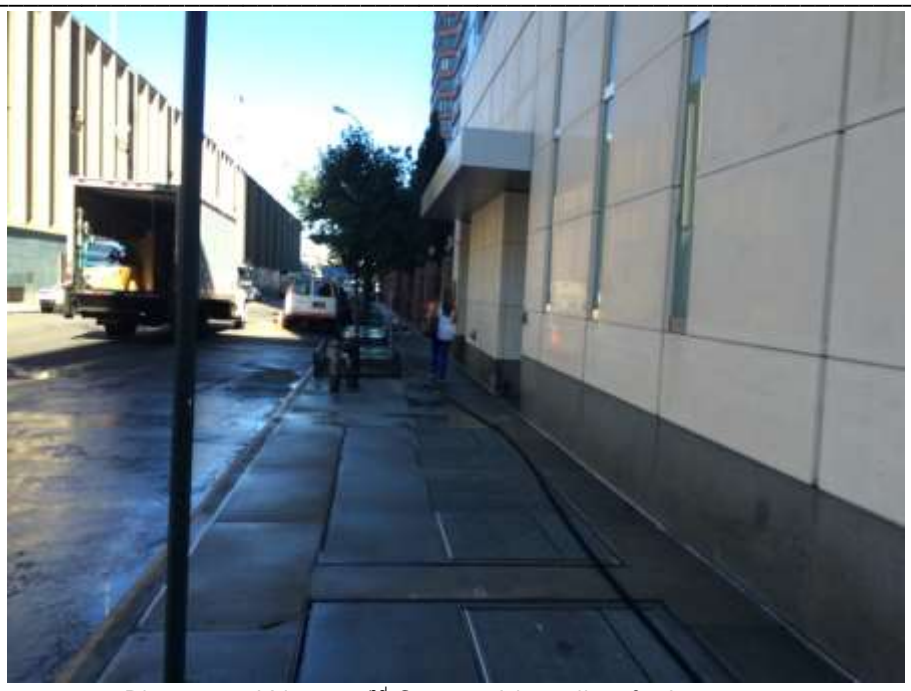


Photo 15: West 43nd Street sidewalk – facing west.

Attachment C
Annual Groundwater Monitoring Report- 2015

November 6, 2015

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 – 2015
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 fifth annual sampling event conducted in October 2015.

2015 Annual Groundwater Sampling

On October 16, 2015, Langan sampled groundwater monitoring wells MW-N2 and MW-S2. A Well Location Map is attached as Figure 2. 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 2 to 2.5 gallons were purged from monitoring wells MW-N2 and MW-S2, respectively. After purging, samples MW-N2_101615 and MW-S2_101615 were collected using a Waterra pump and dedicated tubing.

Groundwater samples MW-N2_101615 and MW-S2_101615 were collected into laboratory-prepared containers, tightly sealed, uniquely labeled, and then stored on ice for transport to Alpha Analytical (Alpha) in Westborough, Massachusetts, under standard chain-of-custody procedures. The groundwater samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260, semivolatile organic compounds (SVOCs) by EPA Method 8270, Target Analyte List (TAL) metals by EPA SW 6000/7000, cyanide (total) by EPA SW 9012, and cyanide (available) by EPA 9014.

Findings

Observations

- Measurable free product was not observed in either well.
- A sheen was observed on purged water from MW-N2
- Odors were noted in both monitoring wells.
- The wells were observed to be in good condition.

Groundwater Analytical Results

Analytical results for the 2015 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	
• 2,4-dimethylphenol	• Biphenyl
• acenaphthene	• naphthalene
• benzo(a)anthracene	• phenol
Inorganics	
• iron	• manganese
• magnesium	• sodium

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

Analytical results for the First Quarter 2009 through Fifth Annual 2015 sampling rounds are summarized in Table 1 and the laboratory analytical report for the 2015 annual sampling results is included as Attachment B.

In general, VOC and SVOC concentrations in both wells decreased since the last sampling event. VOC and SVOC concentrations are lower in the sample collected from MW-S2.

Please contact us if you have any questions.

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

Ryan Manderbach, CHMM
Senior Project Manager

Enclosure(s):

Figure 1	Site Location Map
Figure 2	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
Nicole Rice – 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		2015		
		1st Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter[2]	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		
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**		**MW-N2_101615**		
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**		**10/16/2014**		
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**		**L1526418-02**		
SAMPLE TYPE																					
SAMPLE DEPTH (ft.)																					
VOCs (µg/L)																					
1,2,4-Trimethylbenzene	5	*1200*	U	*1200*	U	*1200*	U	*1200*	U	*1200*	U	*250*	U	*500*	U	*620*	U	*620*	U	**270**	J	**240**	J	**80**	J	**130**	J	**89**	J
1,3,5-Trimethylbenzene	5	*1200*	U	*1200*	U	*1200*	U	*1200*	U	*1200*	U	*250*	U	*500*	U	*620*	U	*620*	U	**96**	J	*620*	U	*250*	U	*250*	U	*250*	U
Benzene	1	**19000**		**19000**		**17000**		**15000**		**2900**		**610**		**1100**		**2100**		**2400**		**2400**		**1600**		**1100**		**1400**		**1200**	
Ethylbenzene	5	**1900**		**1900**		**1900**		**1800**		**1400**		**170**		**410**		**810**		**980**		**810**		**580**	J	**250**		**300**		**240**	J
Isopropylbenzene	5	*250*	U	*250*	U	*250*	U	*250*	U	*250*	U	*50*	U	*100*	U	*120*	U	*120*	U	*100*	U	*620*	U	*250*	U	*250*	U	*250*	U
Methylene chloride	5	*2500*	U	*2500*	U	*2500*	U	*2500*	U	*2500*	U	*500*	U	*1000*	U	*1200*	U	*1200*	U	*1000*	U	*620*	U	*250*	U	*250*	U	*250*	U
Naphthalene	10	**15000**		**15000**		**18000**		**19000**		**22000**		**4200**		**5400**		**12000**		**15000**		**10000**		**9200**		**3600**		**3900**		**4900**	
n-Butylbenzene	5	*250*	U	*250*	U	*250*	U	*250*	U	*250*	U	*50*	U	*100*	U	*120*	U	*120*	U	*100*	U	*620*	U	*250*	U	*250*	U	*250*	U
n-Propylbenzene	5	*250*	U	*250*	U	*250*	U	*250*	U	*250*	U	*50*	U	*100*	U	*120*	U	*120*	U	*100*	U	*620*	U	*250*	U	*250*	U	*250*	U
o-Xylene	5	**1400**		**1300**		**1400**		**1200**		**1000**		**180**		**330**		**590**		**760**		**630**		**470**	J	**230**	J	**280**		**230**	J
p/m-Xylene	5	**3200**		**3100**		**3100**		**2900**		**2200**		**330**		**600**		**1100**		**1400**		**1200**		**760**		**280**		**370**		**300**	
p-Isopropyltoluene	5	*250*	U	*250*	U	*250*	U	*250*	U	*250*	U	*50*	U	*100*	U	*120*	U	*120*	U	*100*	U	*620*	U	*250*	U	*250*	U	*250*	U
Styrene	5	*500*	U	*500*	U	*500*	U	*500*	U	*500*	U	*100*	U	*200*	U	*250*	U	*250*	U	*200*	U	*620*	U	*250*	U	*250*	U	*250*	U
Toluene	5	**4200**		**4000**		**4400**		**4100**		**740**		*75*	U	*150*	U	**290**		**420**		**410**		**240**	J	**90**	J	**120**	J	**85**	J
SVOCs (µg/L)																					
2,4-Dimethylphenol	50	**1800**		**1800**		**830**		**1200**		**270**		*500*	U	29		**160**		10	U	**230**		**150**		**89**		25		**110**	
Acenaphthene	20	**120**		**160**		**95**		**99**		**61**		**65**		**93**		**97**		**170**		**140**		**190**		**96**		**110**		**77**	
Benzo(a)anthracene	0.002	**8.8**		*39*	U	*8.2*	U	*9.6*	U	*40*	U	*10*	U	**9.2**		*80*	U	*100*	U	*80*	U	*50*	U	**1.5**		**10**		**4.7**	J
Benzo(a)pyrene	0	**7.2**		*39*	U	*8.2*	U	*9.6*	U	*40*	U	*10*	U	**8.9**		*80*	U	*100*	U	*80*	U	*50*	U	**1.2**		**7.8**		*40*	U
Benzo(b)fluoranthene	0.002	**8.4**		*39*	U	*8.2*	U	*9.6*	U	*40*	U	*10*	U	**9.2**		*80*	U	*100*	U	*80*	U	*50*	U	**1.2**		**12**		*40*	U
Benzo(k)fluoranthene	0.002	*3.9*	U	*39*	U	*8.2*	U	*9.6*	U	*40*	U	*10*	U	*4*	U	*80*	U	*100*	U	*80*	U	*50*	U	**0.8**	J	**4.2**		*40*	U
Biphenyl	5	**50**		**56**		*26*	U	**36**		**72**		*250*	U	**30**		**34**		**52**		**46**		**47**		**28**		**33**		**20**	
Bis(2-Ethylhexyl)phthalate	5	*24*	U	*24*	U	*26*	U	**46**		*25*	U	*250*	U	5	U	5	U	5	U	3	U	3	U	*15*	U	*15*	U	3	U
Chrysene	0.002	**4.1**		*39*	U	*8.2*	U	*9.6*	U	*40*	U	*10*	U	**7.2**		*80*	U	*100*	U	*80*	U	*50*	U	**1**		**7.9**		*40*	U
Fluorene	50	**56**		**80**		**59**		47		40	U	39		**60**		*80*	U	*100*	U	**58**	J	**67**		29		41		30	J
Indeno(1,2,3-cd)Pyrene	0.002	*3.9*	U	*39*	U	*8.2*	U	*9.6*	U	*40*	U	*10*	U	*4*	U	*80*	U	*100*	U	*80*	U	*50*	U	**0.64**	J	**6.5**		*40*	U
Naphthalene	10	**12000**		**14000**		**8900**		**9400**		**2200**		**2700**		**4200**		**6900**		**9100**		**6800**		**8400**		**2800**		**3000**		**2400**	
Phenanthrene	50	**100**		**150**		**53**		**62**		40		**52**		**84**		*80*	U	*100*	U	**97**		**90**		33		**75**		48	
Phenol	1	**120**		**110**		**61**		**87**		*35*	U	*350*	U	**17**		**27**		**16**		*5*	U	*5*	U	*25*	U	**15**	J	**3**	J
Total Metals																					
Arsenic, Total	25	15		17		15		15		11		6		5		11		14		**128**		7.6		6.78		4.5		2.7	
Iron, Total	300	**5300**		**2700**		**1900**		**1200**		**3500**		**4000**		**4800**		**2600**		**12000**		**3300**		**1270**		**1780**		**2870**		**1620**	
Lead, Total	25	15		10	U	10	U	10	U	10	U	10	U	10	U	10	U	**67**		10	U	2.4	J	1.79		2.3		0.6	J
Magnesium, Total	35000	**70000**		**72000**		**70000**		**59000**		**83000**		**46000**		**46000**		**51000**		**86000**		**64000**		**42000**		**57700**		**63400**		**59600**	
Manganese, Total	300	**1570**		**1430**		**1570**		**1340**		**746**		**603**		**632**		**528**		**816**		**582**		**542.8**		**337.5**		**470.6**		**436.5**	
Mercury, Total	0.7	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.3		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Sodium, Total	20000	**300000**		**320000**		**270000**		**250000**		**240000**		**110000**		**160000**		**200000**		**240000**		**210000**		**127000**		**175000**		**172000**		**189000**	
General Chemistry																					
Cyanide, Total	200	**1100**		**1090**		**789**		**799**		**890**		**1780**		**1500**		**1060**		**1680**		**612**		126		**1210**		**1000**		156	

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

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.

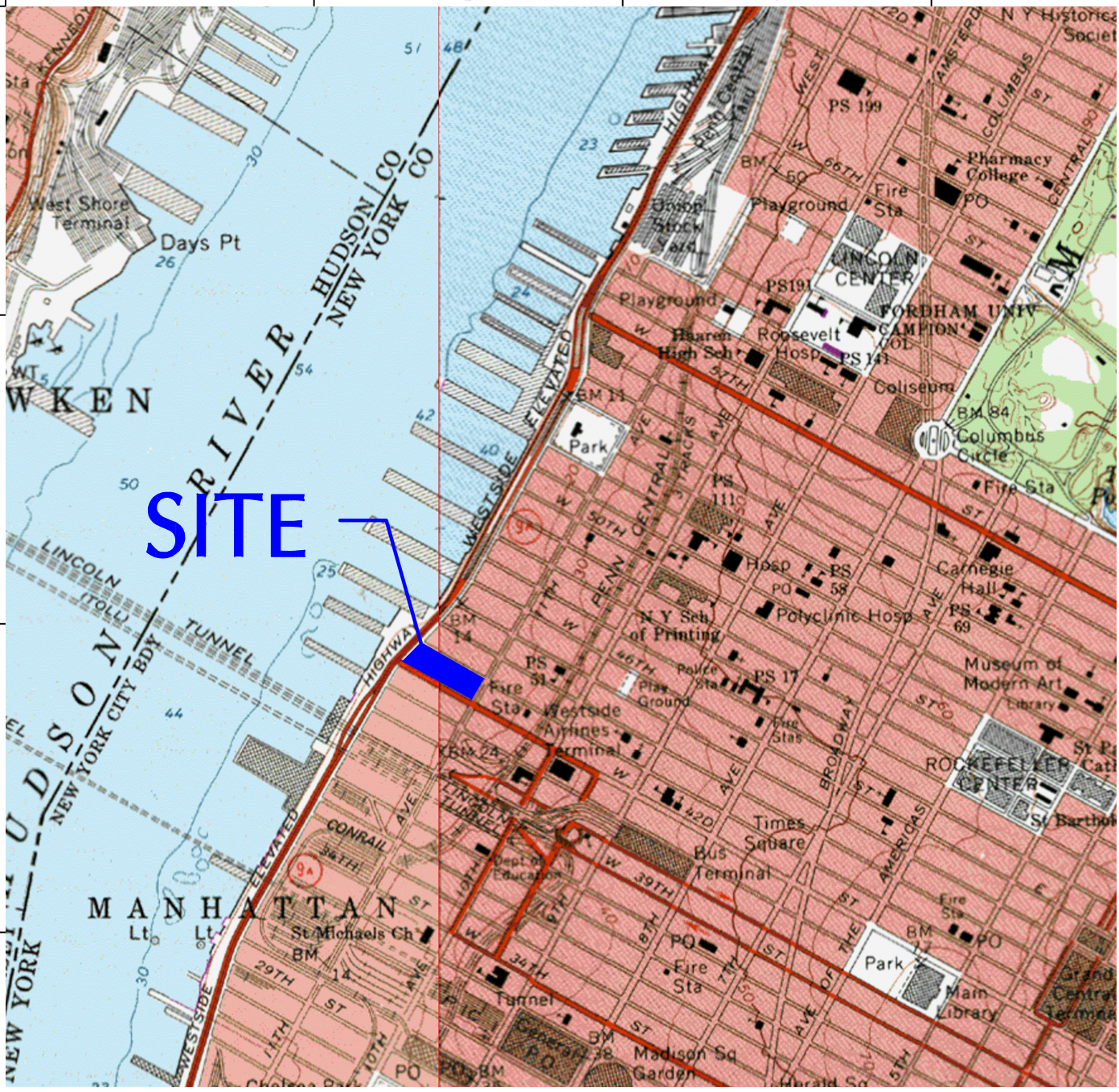
Table 1
VOC, SVOC, Metals and Cyanide Exceedances in Groundwater Samples
River Place II
New York, New York
Langan Project No. 170040901

		Quality Control																					
		2009								2010										2011		2012		2015	
		1st Quarter		1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		YEAR 1		YEAR 2		YEAR 5	
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**		**TB01_101615**	
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**		**10/16/2015**	
LAB SAMPLE ID		**L0903143-04**		**L0903143-05**		**L0908040-03**		**L0913185-02**		**L1000282-03**		**L1003006-03**		**L1008735-03**		**L1013903-03**		**L1020042-03**		**L1116955-03**		**L1218727-03**		**L1526418-04**	
SAMPLE TYPE																									
SAMPLE DEPTH (ft.)																									
VOCs (µg/L)																									
1,2,4-Trimethylbenzene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,3,5-Trimethylbenzene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Benzene	1	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Ethylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	2.5	U	2.5	U
Isopropylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	2.5	U	2.5	U
Methylene chloride	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	2.5	U	2.5	U
Naphthalene	10	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
n-Butylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	2.5	U	2.5	U
n-Propylbenzene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	2.5	U	2.5	U
o-Xylene	5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	2.5	U
p/m-Xylene	5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	2.5	U
p-Isopropyltoluene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	2.5	U	2.5	U
Styrene	5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	2.5	U	2.5	U
Toluene	5	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U	0.75	U	2.5	U	2.5	U
SVOCs (µg/L)																									
2,4-Dimethylphenol	50	9.6	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Acenaphthene	20	0.19	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(a)anthracene	0.002	*0.19*	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(a)pyrene	0	*0.19*	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(b)fluoranthene	0.002	*0.19*	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzo(k)fluoranthene	0.002	*0.19*	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Biphenyl	5	4.8	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Bis(2-Ethylhexyl)phthalate	5	4.8	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Chrysene	0.002	*0.19*	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Fluorene	50	0.19	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Indeno(1,2,3-cd)Pyrene	0.002	*0.19*	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Naphthalene	10	0.34		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Phenanthrene	50	0.19	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Phenol	1	*6.7*	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Total Metals																									
Arsenic, Total	25	5	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Iron, Total	300	50	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Lead, Total	25	10	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Magnesium, Total	35000	100	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Manganese, Total	300	10	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Mercury, Total	0.7	0.2	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Sodium, Total	20000	2000	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
General Chemistry																									
Cyanide, Total	200	5	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	

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.

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

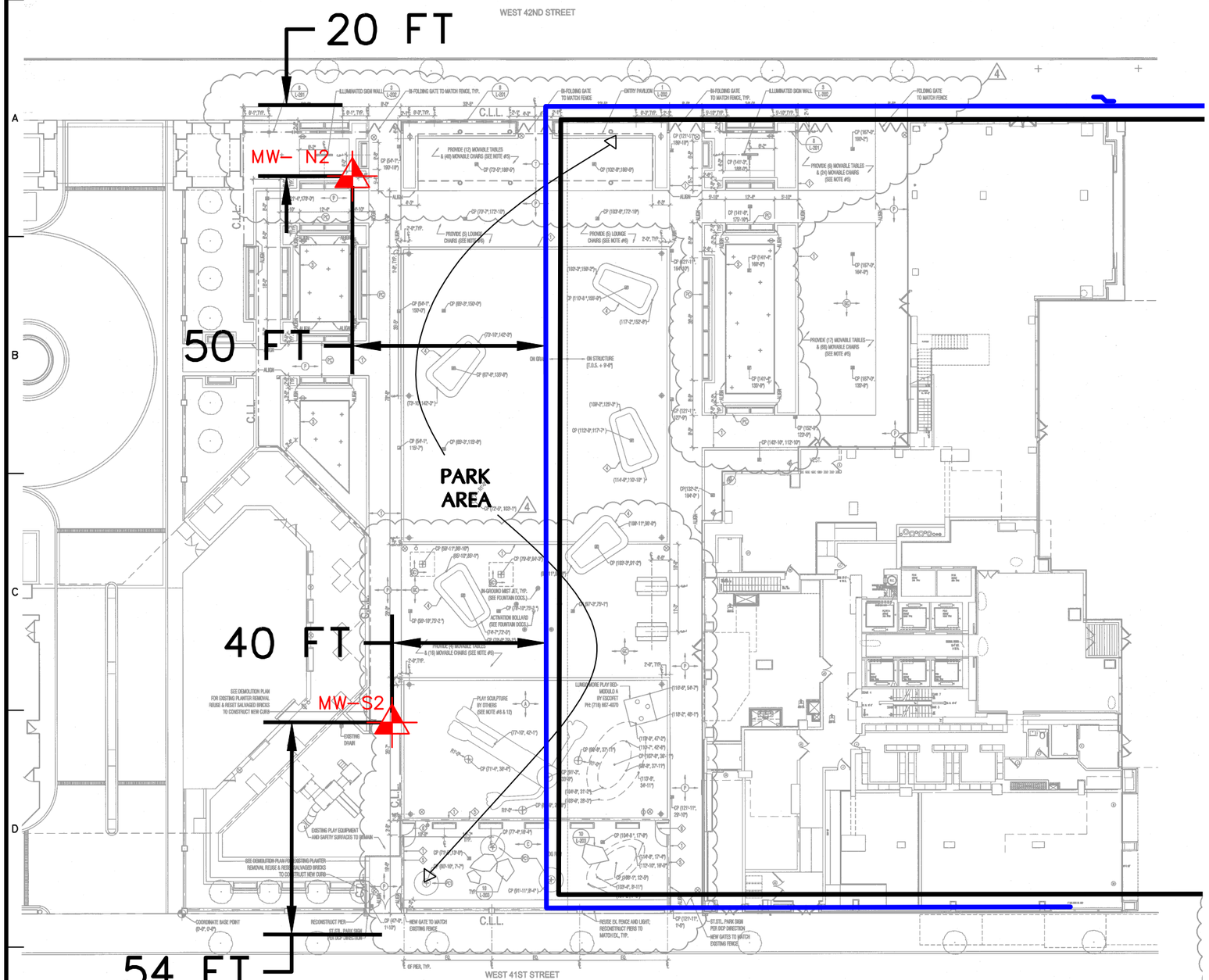
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

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 No. 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:	Well#/Location: MW-52	Job No.
Date: 10/16/15	Weather: 60s, P.C.	Sampling Personnel:

Well Information

Sample ID	MW-52_101615
Well Depth (ft)	19.72 (soft bottom)
Screened Interval (ft)	
Casing Elevation (msl)	
Casing Diameter (in)	
Depth to Water (ft)	9.02 (from N) @0800
Water Elevation (msl)	
Casing Volume (gal)	
PID/FID Reading (ppm)	0.0

Purging Information

Purging Method	Low Flow Waterra
Purging Rate (l/m; gpm)	
Start Purge Time	0750
End Purge Time	0915
Volume Purged (gal)	2.6

Sampling Information

Sampling Method	
Start Sampling Time	0920
End Sampling Time	0950
Depth Before Sampling (ft)	9.64 after=9.63
Number Bottles Collected	8

Sample Time	Parameters							
	Temp (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Depth to Water (ft)	Purged Volume (gallons)
0750	—	—	—	—	—	—	9.02	—
0815	14.82	6.09	-67	1.99	129	4.41	9.29	0.25
0820	15.40	6.71	-118	1.97	144	3.40	9.39	0.5
0825	15.37	6.81	-117	1.98	136	3.34	9.41	0.7
0830	15.39	6.85	-116	1.97	122	2.73	9.45	0.85
0835	15.30	6.87	-116	1.98	123	2.46	9.51	1.1
0840	15.21	6.89	-118	1.99	104	2.31	9.53	1.25
0845	15.14	6.88	-119	1.99	110	2.79	9.55	1.45
0850	15.28	6.91	-122	1.99	85.8	2.37	9.58	1.55
0855	15.23	6.92	-121	2.00	70.4	2.19	9.59	1.75
0900	15.25	6.93	-122	2.00	62.2	2.11	9.62	2.0
0905	15.29	6.93	-122	2.00	54.3	2.16	9.63	2.2
0910	15.36	6.94	-123	2.00	51.5	2.18	9.64	2.3
0915	15.18	6.94	-124	2.02	50.7	2.17	9.65	2.5

Notes/Remarks

Stablility
PH - ± 0.1 unit
Specific Conductance - ± 3%
Temperature - ± 3%
Dissolved Oxygen - ±10% above 0.5 mg/L
Turbidity - ± 10% above 5 NTU
ORP/Eh - ±10 millivolts
Maximum flow rate - < 0.5 L/m or 0.13 gpm
Maximum drawdown - < 0.33 feet

water has mild odor, no sheen
slight turbidity when beginning pumping.
Volume = (0.163 gal/ft)(40 ft) = ~1.6 gal

0.0 NTU
10.33 mg/L DO
pH = 4.00
mS/cm 4.51

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

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site:	Well#/Location: MW-N2	Job No.
Date: 10/16/15	Weather:	Sampling Personnel:

Well Information

Sample ID	
Well Depth (ft)	19.70
Screened Interval (ft)	
Casing Elevation (msl)	
Casing Diameter (in)	
Depth to Water (ft)	9.29 (From N) @0800
Water Elevation (msl)	
Casing Volume (gal)	
PID/FID Reading (ppm)	0.0

Purging Information

Purging Method	
Purging Rate (l/m; gpm)	
Start Purge Time	1030
End Purge Time	1200
Volume Purged (gal)	2.1

Sampling Information

Sampling Method	
Start Sampling Time	1200
End Sampling Time	1235
Depth Before Sampling (ft)	9.36 (9.34 after)
Number Bottles Collected	8

	Parameters							
Sample Time	Temp (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Depth to Water (ft)	Purged Volume (gallons)
1030	—	—	—	—	—	—	9.30	—
1050	15.13	7.26	-118	3.07	22.5	3.40	9.36	0.25
1055	14.97	6.97	-116	3.04	11.3	2.41	9.36	0.5
1100	15.02	6.95	-116	2.98	9.1	2.15	9.37	0.65
1105	15.07	6.95	-113	2.88	8.6	1.90	9.37	0.75
1110	15.08	6.95	-111	2.84	8.1	1.83	9.37	0.88
1115	15.18	6.96	-107	2.73	6.5	1.72	9.38	1.0
1125	15.12	6.98	-98	2.66	6.4	1.65	9.35	1.2
1130	15.03	6.98	-95	2.63	6.5	1.53	9.35	1.3
1135	15.31	6.98	-94	2.53	6.5	1.68	9.36	1.5
1140	15.33	6.99	-93	2.51	5.5	1.63	9.36	1.6
1145	15.28	7.00	-92	2.45	4.1	1.54	9.36	1.70
1150	15.26	7.00	-92	2.43	4.0	1.51	9.36	1.85
1155	15.48	7.00	-90	2.40	3.9	1.49	9.36	2

Notes/Remarks

Stability

- **PH** - ± 0.1 unit
- **Specific Conductance** - ± 3%
- **Temperature** - ± 3%
- **Dissolved Oxygen** - ±10% above 0.5 mg/L
- **Turbidity** - ± 10% above 5 NTU
- **ORP/Eh** - ±10 millivolts
- **Maximum flow rate** - < 0.5 L/m or 0.13 gpm
- **Maximum drawdown** - < 0.33 feet

- Pumps clear initially, strong MGP odor
- Inlet @ 15 ft btoc (same as S2)
- 1120 - PF collected WW01_101615 (mixture of 1 gal S2 + 1 gal N2, mixed transferred into 3x40mL VOAs w/ unused paper cup).

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

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

www.alphalab.com

Alpha Analytical

Laboratory Code: 11148

SDG Number: L1526418

Table of Contents

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

Lab Number: L1526418
Report Date: 10/23/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1526418-01	MW-S2_101615	WATER	NY, NY	10/16/15 09:20	10/16/15
L1526418-02	MW-N2_101615	WATER	NY, NY	10/16/15 12:00	10/16/15
L1526418-03	WW01_101615	WATER	NY, NY	10/16/15 11:20	10/16/15
L1526418-04	TB01_101615	WATER	NY, NY	10/16/15 00:00	10/16/15

Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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

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

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

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

Report Submission

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

Case Narrative (continued)

MDL column.

Semivolatile Organics by SIM

L1526418-01: The sample has elevated detection limits due to the dilution required by the sample matrix.

L1526418-02: 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.

Cyanide, Physiologically Available

The WG832054-5 Laboratory Duplicate RPD (36%), performed on L1526418-01, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

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

Authorized Signature: Cristen Walker Report Date: 10/23/15

Title: Technical Director/Representative

List of Organic Method Qualifiers

Table 1

Qualifier (Q)	Description
B	Entered if the analyte is found in the associated blank as well as the sample.
C	Applied to pesticide results when the identification has been confirmed by GC/MS.
D	Included when the all identified compounds in the analysis are at the secondary dilution factor.
E	Identified compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
J	Indicates an estimated value, may indicate one of the following, depending on the situation: (1) The reported value is estimated and below the MDL. (2) Used when estimating a concentration for TIC where a 1:1 response is assumed or when the result indicates the presence of a compound that meets the identification criteria, but the results is less than the quantitation limit, but greater than zero. (3) QC associated with this analyte is within warning limits.
N	Included for TIC that indicate presumptive evidence of a compound.
U	Entered if the analyte was analyzed for, but not detected.
P	Used for a pesticide/Aroclor target analyte when the concentration difference between 2 GC columns is greater than 25%; the lower value is flagged with a “P”.
EMPC	“Estimated Maximum Possible Concentration” – The amount of analyte cannot be accurately quantified, so a maximum concentration has been estimated for the compound.
“XYZ”	“Wildcard” or Laboratory defined qualifier.

Note: Form I allows only one character in each qualifier column. If multiple qualifiers are applicable, please assess qualifier priority in the following order: U, E, J, B, D, C, P, N. Reporting done in the EDD may include multiple qualifiers when applicable, separated by a single space.

(Information obtained from NYSDEC ASP Exhibit B, 7/2005, page 64)

List of Inorganic Method Qualifiers

Table 2

Qualifier	Column (1)	Description
Concentration qualifiers		
B	C	Entered if the reported value was less than the CRDL, but greater than the IDL.
U	C	Entered if the analyte was analyzed for, but not detected.
J	C	Entered if the reported value is estimated and below the MDL.
*	C	Duplicate precision exceeds RPD limit.
M	C	Replicate precision exceeds RPD limit.
"XYZ"	C	"Wildcard" or Laboratory defined qualifier.
Qualifier specific entries		
E	Q	Entered if the reported value is estimated because of the presence of interferences.
Method qualifiers		
A	M	Flame atomic absorption
AS	M	Semi-automated spectrophotometric
AV	M	Automated cold vapor atomic absorption
C	M	Manual spectrophotometric
F	M	Furnace atomic absorption
MS	M	Mass spectrometry (ICP-MS)
NR	M	Analyte is not required to be analyzed
P	M	Inductively coupled plasma (ICP)
" "	M	No data have been entered

(1) The term "Column" is used to indicate under which column heading in the reporting forms that the qualifier will be found under.
Note: Form I allows only one character in each qualifier column. If multiple qualifiers are applicable to column C, please assess qualifier priority in the following order: U, J, B. Reporting done in the EDD may include multiple qualifiers when applicable, separated by a single space.

(Information obtained from NYSDEC ASP Exhibit B, 7/2005, page 65)

Volatile Organics Instruments

Volatile Organics: Jack

Instrument: Agilent 5975MSD	Column Type: RTX-VMS
Trap: Supelco K Trap (VOACARB 3000)	Column Length: 20 Meters
Concentrator: EST Encon	df: 1.00um
Autosampler: EST Centurion	ID: 0.18mm
Purge time: 11 min	Desorb: 2 min

Volatile Organics: Quimby

Instrument: Agilent 5973MSD	Column Type: RTX-VMS
Trap: Supelco K Trap (VOACARB 3000)	Column Length: 20 Meters
Concentrator: EST Encon	df: 1.00um
Autosampler: EST Centurion	ID: 0.18mm
Purge time: 11 min	Desorb: 2 min

Volatile Organics: Curly

Instrument: Agilent 5972 MSD	Column Type: Restek RTX-502.2
Trap: Supelco K Trap (VOACARB 3000)	Column Length: 40 Meters
Concentrator: Tekmar 3000	df: 1.00 um
Autosampler: Archon	ID: 0.18 mm
Purge time: 11 min	Desorb: 2 min

Volatile Organics: Elaine

Instrument: Agilent 5973 MSD	Column Type: Restek RTX-502.2
Trap: Supelco K Trap (VOACARB 3000)	Column Length: 40 Meters
Concentrator: Teledyne Velocity	df: 1.00 um
Autosampler: Teledyne Solatek	ID: 0.18 mm
Purge time: 11 min	Desorb: 2 min

Volatile Organics: Gonzo

Instrument: Agilent 5973 MSD
Trap: Supelco K Trap (VOACARB 3000)
Concentrator: Teledyne Velocity
Autosampler: Teledyne Solatek
Purge time: 11 min

Column Type: Restek RTX-502.2
Column Length: 40 Meters
df: 1.00 um
ID: 0.18 mm
Desorb: 2 min

Volatile Organics: VOA101

Instrument: Agilent 5975C inert XL MSD
Trap: EST K Trap (VOACARB 3000)
Concentrator: Encon Evolution
Autosampler: EST Centurion
Purge time: 11 min

Column Type: Restek RTX-VMS
Column Length: 30 Meters
df: 1.40 um
ID: 0.25 mm
Desorb: 1 min

Volatile Organics: Charlie/Voa100/Voa104

Instrument: Agilent 5975C MSD
Trap: Supelco K Trap (VOACARB 3000)
Concentrator: Encon Evolution
Autosampler: EST Centurion
Purge time: 11 min

Column Type: Agilent DB-624
Column Length: 25 Meters
df: 1.12 um
ID: 0.20 mm
Desorb: 2 min

Volatile Organics: M

Instrument: Agilent 6890

Concentrator: Tekmar 2016
Autosampler: Tekmar 3100

Column Type: Restek RTX 502.2
Column Length: 105 Meters
df: 3.00 um
ID: 0.53 mm

Volatile Organics: L/N

Instrument: Agilent 6890

Concentrator: Encon Evolution
Autosampler: EST Centurion

Column Type: Restek RTX 502.2
Column Length: 105 Meters
df: 3.00 um
ID: 0.53 mm

Volatile Organics: O/P

Instrument: Agilent 7890A

Concentrator: Encon Evolution
Autosampler: EST Centurion

Column Type: Restek RTX 502.2
Column Length: 105 Meters
df: 3.00 um
ID: 0.53 mm

Volatile Organics in Air Instruments

Volatile Organics in Air:

Instrument: Agilent 6890 GC / 5975 MSD	Column Type: Restek RTX-1
	Column Length: 60 Meters
Concentrator: Entech 7100A	df: 1.00 um
Autosampler: Entech 7016CA	ID: 0.52 mm

Trap 1: Glass Bead: manufacturer-Entech: 20 cm packing material
Trap 2: Tenax: manufacturer-Entech: 20 cm packing material

Semivolatile Organics Instruments

Semivolatile Organics (Acid/Base/Neutral Extractables): Buffy

Instrument: Agilent 5973N MSD	Injection volume: 1 ul
Column Type: Restek RTX-5MS	df: 0.25 um
Column Length: 30 Meters	ID: 0.32 mm

Semivolatile Organics (Acid/Base/Neutral Extractables): Juliet/GCMS5/GCMS7

Instrument: Agilent 5973N MSD	Injection volume: 1 ul
Column Type: Restek RXI-5SIL MS	df: 0.25 um
Column Length: 30 Meters	ID: 0.32 mm

Polynuclear Aromatic Hydrocarbons by 8270 SIM: Dakota/Mork

Instrument: Agilent 5973 MSD	Injection volume: 1 ul
Column Type: Restek RTX-5MS	df: 0.25 um
Column Length: 30 Meters	ID: 0.32 mm

Polynuclear Aromatic Hydrocarbons by 8270 SIM: Mindy

Instrument: Agilent 5973N MSD	Injection volume: 1 ul
Column Type: Restek RXI-5SIL MS	df: 0.25 um
Column Length: 30 Meters	ID: 0.32 mm

Pesticides/PCB : Pest 11/Pest2/Pest7/Pest12

Instrument: Agilent 6890 w/Dual Micro ECDs	Injection Volume: 1uL
Column Type: Restek RTX-CLP (Channel A)	df: 0.32 um
Column: Restek RTX-CLPPesticide II (Channel B)	df: 0.25 um
Column Length: 30 Meters (Both)	ID: 0.32 mm (Both)

Pesticides/PCB: Pest 10/ Pest9

Instrument: Agilent 6890 w/Dual Micro ECDs	Injection Volume: 1uL
Column Type: Restek STX-CLP (Channel A)	df: 0.32 um
Column: Restek STX-CLPPesticide II (Channel B)	df: 0.25 um
Column Length: 30 Meters (Both)	ID: 0.32 mm (Both)

Herbicides

Instrument: Agilent 6890 w/Dual Micro ECDs	Injection Volume: 1uL
Column Type: Restek RTX-1701 (Channel A)	df: 0.25 um
Column Type: Restek RTX-5 (Channel B)	df: 0.25 um
Column Length: 30 Meters (Both)	ID: 0.32 mm (Both)

Petro9

Instrument: Agilent 6890 w/FID	Injection Volume: 1uL
Column: Restek RTX-5	df: 0.25 um
Column Length: 30 Meters	ID: 0.32 mm

EPH Petro10/ Petro11

Instrument: Agilent 6890N w/FID	Injection Volume: 1uL
Column: Restek RTX-5-MS	df: 0.25um
Column Length: 30 Meters	ID: 0.32 mm

Explosives

Instrument: Dionex ICS-3000, AS50 Autosampler and PDA-100 detectors.
Injection Volume: 100uL
Column: Phenomenex Synergi 4u Hydro-RP and Luna 5u Phenyl-Hexyl.

GC/MS Forensic Semivolatile Organic Instruments

Semivolatile Organics (ALK-PAH extractables): PAH1/PAH2/PAH3/PAH4

Instrument: Agilent 5973C MSD	Injection volume: 1 ul
Column Type: Phenomenex ZB-5	df: 0.25 um
Column Length: 60 Meters	ID: 0.25 mm

Semivolatile Organics (ALK-PAH extractables): PAH8/PAH9/PAH10/PAH11/PAH12/PAH13/PAH14

Instrument: Agilent 5975C MSD	Injection volume: 1 ul
Column Type: Phenomenex ZB-5	df: 0.25 um
Column Length: 60 Meters	ID: 0.25 mm

Semivolatile Organics (ALK-PAH extractables): PAH17/PAH18/PAH19

Instrument: Agilent 5975C MSD	Injection volume: 1 ul
Column Type: Phenomenex ZB-5	df: 0.25 um
Column Length: 60 Meters	ID: 0.25 mm

GC/FID Forensic Semivolatile Organic Instruments

Semivolatile Organics (SHC extractables):PAH1/PAH2/PAH3/PAH4/PAH8

Instrument: Agilent 6890N w/FID	Injection Volume: 1uL
Column: Restek RTX-5	df: 0.25um
Column Length: 60 Meters	ID: 0.25 mm

Semivolatile Organics (SHC extractables): FID6 (dual column)/ FID9 (dual column)/ FID17 (dual column)

Instrument: Agilent 6890N w/FID	Injection Volume: 1uL
Column: Restek RTX-5	df: 0.25um
Column Length: 60 Meters	ID: 0.25 mm

Semivolatile Organics (SHC extractables):FID7 (dual column)

Instrument: Agilent 7890N w/FID	Injection Volume: 1uL
Column: Restek RTX-5	df: 0.25um
Column Length: 60 Meters	ID: 0.25 mm

Sample Delivery Group Form

Laboratory Job number: L1526418
Project Manager: Ben Rao **Review Date:** 10/19/2015
Project Number: 170040901
Project Name: RIVER PLACE I & II **Received:** 10/16/2015 15:05
Client Account: Langan Engineering & Environmental **Received by:** RS/SH

Samples Delivered by: COURIER **Call Tracker #**
Bill Of Laden N/A **Trackingnum**
Coc Present Present

Container Status Intact **Sample IDs**

All Containers Accounted For? Yes

Were Extra Samples Received? No

Do Sample Labels and COC agree? Yes

Are Samples in Appropriate Containers? Yes

Are Samples Received within Holding time? Yes

pH of Samples upon Receipt <2, 7, >12 **Are samples Properly Preserved?** Yes
Initial pH **preserved in house with** **Final pH**
Other Issues
Chlorine Check N/A

Are VOA/VPH Vials Present? Yes
Aqueous: Do Vials Contain Head Space? No
Soils: Is MeOHCovering the Soil? N/A
Reagent H2O Preserved vials Frozen on N/A
Frozen by Client N/A

Cooler	Seal	Ice Present	Blue Ice Present	Temp. (Celsius)	Frozen upon Receipt	Delivered Direct from Site
A	Absent	Yes	No	3.1 - IR Gun	No	No

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Oct 23 2015, 03:11 pm

Login Number: L1526418
Account: LANGAN-NYC Langan Engineering & EnvironmentalProject: 170040901
Received: 16OCT15 Due Date: 23OCT15

Sample #	Client ID	Mat	PR	Collected	Container
L1526418-01	MW-S2_101615		1	S0 16OCT15 09:20	2-Amber-A1,1-Plastic-C.25,2-Plastic-E.25,3-Vial-B

| ASP-A Package Due Date: 10/23/15

ASP-A,NYTCL-8260,NYTCL-8270/8270SIM,NYTCL-8270,NYTCL-8270-SIM,PACN,TAL-6020T,AG-6020T,AL-6020T,AS-6020T,BA-6020T,BE-6020T,CA-6020T,CD-6020T,CO-6020T,CR-6020T,CU-6020T,FE-6020T,HG-T,K-6020T,MG-6020T,MN-6020T,NA-6020T,NI-6020T,PB-6020T,PREPT,SB-6020T,SE-6020T,TL-6020T,V-6020T,ZN-6020T,TCN-9010

Sample #	Client ID	Mat	PR	Collected	Container
L1526418-02	MW-N2_101615		1	S0 16OCT15 12:00	2-Amber-A1,1-Plastic-C.25,2-Plastic-E.25,3-Vial-B

| Package Due Date: 10/23/15

NYTCL-8260,NYTCL-8270/8270SIM,NYTCL-8270,NYTCL-8270-SIM,PACN,TAL-6020T,AG-6020T,AL-6020T,AS-6020T,BA-6020T,BE-6020T,CA-6020T,CD-6020T,CO-6020T,CR-6020T,CU-6020T,FE-6020T,HG-T,K-6020T,MG-6020T,MN-6020T,NA-6020T,NI-6020T,PB-6020T,PREPT,SB-6020T,SE-6020T,TL-6020T,V-6020T,ZN-6020T,TCN-9010

Sample #	Client ID	Mat	PR	Collected	Container
L1526418-03	WW01_101615		1	S0 16OCT15 11:20	3-Vial-B

| Package Due Date: 10/23/15

NYTCL-8260

Sample #	Client ID	Mat	PR	Collected	Container
L1526418-04	TB01_101615		1	S0 16OCT15 00:00	2-Vial-B

| Package Due Date: 10/23/15

NYTCL-8260

Logged By: Ben Rao

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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

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

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

Page 1 of 1

Date Rec'd in Lab: 10/17/15

ALPHA Job #: L1526418

Client Information

Client: LANGAN ENGINEERING
Address: 360 W. 31st Street NY, NY 10001
Phone: 212-479-5400
Fax: NRICE@LANGANUSA.COM
Email: PFARNHAM@LANGANUSA.COM

Project Information

Project Name: RIVER PLACE I & II
Project Location: NY, NY
Project #: 170040901
(Use Project name as Project #) ☐
Project Manager: NICOLE RICE
ALPHAQuote #:

Turn-Around Time

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

Deliverables

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

Billing Information

☒ Same as Client Info
PO #

Regulatory Requirement

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

Disposal Site Information

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

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC (8260)	SVOC (8270)	TAL Metals (6000 7000)	Total Cyanide (9012)	Available Cyanide (9014)				Total Bottle
26418-01	MW-S2_101615	10/16/15	0920	GW	PTF	X	X	X	X	X				8
-02	MW-N2_101615	"	1200	GW	PTF	X	X	X	X	X				8
-03	NW01_101615	"	1120	GW	PTF	X								3
-04	TB01_101615	↓	—	W	—	X								2

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

Sample Specific Comments

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

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

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

Container Type									
Preservative									

Relinquished By:	Date/Time	Received By:	Date/Time
PTF	10/16/15 1505		
(AAL)	10/16/15 1820	(AAL)	10/16/15 1820
	10/17/15 0005		10/17/15 0010

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

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

Organics

Volatiles Data

Volatiles Sample Data

Form 1
Volatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: L1526418-01	Date Collected	: 10/16/15 09:20
Client ID	: MW-S2_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/21/15 12:28
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: PD
Lab File ID	: 1021A06	Instrument ID	: ELAINE.I
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.13	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
542-75-6	1,3-Dichloropropene, Total	ND	0.50	0.14	U
563-58-6	1,1-Dichloropropene	ND	2.5	0.70	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.14	U
71-43-2	Benzene	26	0.50	0.16	
108-88-3	Toluene	1.7	2.5	0.70	J
100-41-4	Ethylbenzene	41	2.5	0.70	
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.07	U
75-00-3	Chloroethane	1.5	2.5	0.70	J
75-35-4	1,1-Dichloroethene	ND	0.50	0.14	U

Form 1
Volatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: L1526418-01	Date Collected	: 10/16/15 09:20
Client ID	: MW-S2_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/21/15 12:28
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: PD
Lab File ID	: 1021A06	Instrument ID	: ELAINE.I
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	4.2	2.5	0.70	
95-47-6	o-Xylene	10	2.5	0.70	
1330-20-7	Xylenes, Total	14	2.5	0.70	
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
540-59-0	1,2-Dichloroethene, Total	ND	2.5	0.70	U
74-95-3	Dibromomethane	ND	5.0	1.0	U
96-18-4	1,2,3-Trichloropropane	ND	2.5	0.70	U
107-13-1	Acrylonitrile	ND	5.0	1.5	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	1.6	5.0	1.5	J
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-05-4	Vinyl acetate	ND	5.0	1.0	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
594-20-7	2,2-Dichloropropane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
142-28-9	1,3-Dichloropropane	ND	2.5	0.70	U
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.5	0.70	U

Form 1
Volatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: L1526418-01	Date Collected	: 10/16/15 09:20
Client ID	: MW-S2_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/21/15 12:28
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: PD
Lab File ID	: 1021A06	Instrument ID	: ELAINE.I
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
108-86-1	Bromobenzene	ND	2.5	0.70	U
104-51-8	n-Butylbenzene	ND	2.5	0.70	U
135-98-8	sec-Butylbenzene	ND	2.5	0.70	U
98-06-6	tert-Butylbenzene	ND	2.5	0.70	U
95-49-8	o-Chlorotoluene	ND	2.5	0.70	U
106-43-4	p-Chlorotoluene	ND	2.5	0.70	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
87-68-3	Hexachlorobutadiene	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	15	2.5	0.70	
99-87-6	p-Isopropyltoluene	ND	2.5	0.70	U
91-20-3	Naphthalene	50	2.5	0.70	
103-65-1	n-Propylbenzene	5.6	2.5	0.70	
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
108-67-8	1,3,5-Trimethylbenzene	1.0	2.5	0.70	J
95-63-6	1,2,4-Trimethylbenzene	6.8	2.5	0.70	
123-91-1	1,4-Dioxane	ND	250	41.	U
105-05-5	p-Diethylbenzene	1.3	2.0	0.70	J
622-96-8	p-Ethyltoluene	3.2	2.0	0.70	
95-93-2	1,2,4,5-Tetramethylbenzene	2.3	2.0	0.65	
60-29-7	Ethyl ether	ND	2.5	0.70	U
110-57-6	trans-1,4-Dichloro-2-butene	ND	2.5	0.70	U

Form 1
Volatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: L1526418-02D	Date Collected	: 10/16/15 12:00
Client ID	: MW-N2_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/21/15 13:05
Sample Matrix	: WATER	Dilution Factor	: 100
Analytical Method	: 1,8260C	Analyst	: PD
Lab File ID	: 1021A07	Instrument ID	: ELAINE.I
Sample Amount	: 0.1 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
75-09-2	Methylene chloride	ND	250	70.	U
75-34-3	1,1-Dichloroethane	ND	250	70.	U
67-66-3	Chloroform	ND	250	70.	U
56-23-5	Carbon tetrachloride	ND	50	13.	U
78-87-5	1,2-Dichloropropane	ND	100	13.	U
124-48-1	Dibromochloromethane	ND	50	15.	U
79-00-5	1,1,2-Trichloroethane	ND	150	50.	U
127-18-4	Tetrachloroethene	ND	50	18.	U
108-90-7	Chlorobenzene	ND	250	70.	U
75-69-4	Trichlorofluoromethane	ND	250	70.	U
107-06-2	1,2-Dichloroethane	ND	50	13.	U
71-55-6	1,1,1-Trichloroethane	ND	250	70.	U
75-27-4	Bromodichloromethane	ND	50	19.	U
10061-02-6	trans-1,3-Dichloropropene	ND	50	16.	U
10061-01-5	cis-1,3-Dichloropropene	ND	50	14.	U
542-75-6	1,3-Dichloropropene, Total	ND	50	14.	U
563-58-6	1,1-Dichloropropene	ND	250	70.	U
75-25-2	Bromoform	ND	200	65.	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	14.	U
71-43-2	Benzene	1200	50	16.	
108-88-3	Toluene	85	250	70.	J
100-41-4	Ethylbenzene	240	250	70.	J
74-87-3	Chloromethane	ND	250	70.	U
74-83-9	Bromomethane	ND	250	70.	U
75-01-4	Vinyl chloride	ND	100	7.0	U
75-00-3	Chloroethane	ND	250	70.	U
75-35-4	1,1-Dichloroethene	ND	50	14.	U

Form 1
Volatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: L1526418-02D	Date Collected	: 10/16/15 12:00
Client ID	: MW-N2_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/21/15 13:05
Sample Matrix	: WATER	Dilution Factor	: 100
Analytical Method	: 1,8260C	Analyst	: PD
Lab File ID	: 1021A07	Instrument ID	: ELAINE.I
Sample Amount	: 0.1 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
156-60-5	trans-1,2-Dichloroethene	ND	250	70.	U
79-01-6	Trichloroethene	ND	50	18.	U
95-50-1	1,2-Dichlorobenzene	ND	250	70.	U
541-73-1	1,3-Dichlorobenzene	ND	250	70.	U
106-46-7	1,4-Dichlorobenzene	ND	250	70.	U
1634-04-4	Methyl tert butyl ether	ND	250	70.	U
179601-23-1	p/m-Xylene	300	250	70.	
95-47-6	o-Xylene	230	250	70.	J
1330-20-7	Xylenes, Total	530	250	70.	J
156-59-2	cis-1,2-Dichloroethene	ND	250	70.	U
540-59-0	1,2-Dichloroethene, Total	ND	250	70.	U
74-95-3	Dibromomethane	ND	500	100	U
96-18-4	1,2,3-Trichloropropane	ND	250	70.	U
107-13-1	Acrylonitrile	ND	500	150	U
100-42-5	Styrene	ND	250	70.	U
75-71-8	Dichlorodifluoromethane	ND	500	100	U
67-64-1	Acetone	260	500	150	J
75-15-0	Carbon disulfide	ND	500	100	U
78-93-3	2-Butanone	ND	500	190	U
108-05-4	Vinyl acetate	ND	500	100	U
108-10-1	4-Methyl-2-pentanone	ND	500	100	U
591-78-6	2-Hexanone	ND	500	100	U
74-97-5	Bromochloromethane	ND	250	70.	U
594-20-7	2,2-Dichloropropane	ND	250	70.	U
106-93-4	1,2-Dibromoethane	ND	200	65.	U
142-28-9	1,3-Dichloropropane	ND	250	70.	U
630-20-6	1,1,1,2-Tetrachloroethane	ND	250	70.	U

Form 1
Volatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: L1526418-02D	Date Collected	: 10/16/15 12:00
Client ID	: MW-N2_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/21/15 13:05
Sample Matrix	: WATER	Dilution Factor	: 100
Analytical Method	: 1,8260C	Analyst	: PD
Lab File ID	: 1021A07	Instrument ID	: ELAINE.I
Sample Amount	: 0.1 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
108-86-1	Bromobenzene	ND	250	70.	U
104-51-8	n-Butylbenzene	ND	250	70.	U
135-98-8	sec-Butylbenzene	ND	250	70.	U
98-06-6	tert-Butylbenzene	ND	250	70.	U
95-49-8	o-Chlorotoluene	ND	250	70.	U
106-43-4	p-Chlorotoluene	ND	250	70.	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	250	70.	U
87-68-3	Hexachlorobutadiene	ND	250	70.	U
98-82-8	Isopropylbenzene	ND	250	70.	U
99-87-6	p-Isopropyltoluene	ND	250	70.	U
91-20-3	Naphthalene	4900	250	70.	
103-65-1	n-Propylbenzene	ND	250	70.	U
87-61-6	1,2,3-Trichlorobenzene	ND	250	70.	U
120-82-1	1,2,4-Trichlorobenzene	ND	250	70.	U
108-67-8	1,3,5-Trimethylbenzene	ND	250	70.	U
95-63-6	1,2,4-Trimethylbenzene	89	250	70.	J
123-91-1	1,4-Dioxane	ND	25000	4100	U
105-05-5	p-Diethylbenzene	ND	200	70.	U
622-96-8	p-Ethyltoluene	ND	200	70.	U
95-93-2	1,2,4,5-Tetramethylbenzene	ND	200	65.	U
60-29-7	Ethyl ether	ND	250	70.	U
110-57-6	trans-1,4-Dichloro-2-butene	ND	250	70.	U

Form 1
Volatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: L1526418-03D	Date Collected	: 10/16/15 11:20
Client ID	: WW01_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/21/15 13:42
Sample Matrix	: WATER	Dilution Factor	: 25
Analytical Method	: 1,8260C	Analyst	: PD
Lab File ID	: 1021A08	Instrument ID	: ELAINE.I
Sample Amount	: 0.4 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
75-09-2	Methylene chloride	ND	62	18.	U
75-34-3	1,1-Dichloroethane	ND	62	18.	U
67-66-3	Chloroform	ND	62	18.	U
56-23-5	Carbon tetrachloride	ND	12	3.4	U
78-87-5	1,2-Dichloropropane	ND	25	3.3	U
124-48-1	Dibromochloromethane	ND	12	3.7	U
79-00-5	1,1,2-Trichloroethane	ND	38	12.	U
127-18-4	Tetrachloroethene	ND	12	4.5	U
108-90-7	Chlorobenzene	ND	62	18.	U
75-69-4	Trichlorofluoromethane	ND	62	18.	U
107-06-2	1,2-Dichloroethane	ND	12	3.3	U
71-55-6	1,1,1-Trichloroethane	ND	62	18.	U
75-27-4	Bromodichloromethane	ND	12	4.8	U
10061-02-6	trans-1,3-Dichloropropene	ND	12	4.1	U
10061-01-5	cis-1,3-Dichloropropene	ND	12	3.6	U
542-75-6	1,3-Dichloropropene, Total	ND	12	3.6	U
563-58-6	1,1-Dichloropropene	ND	62	18.	U
75-25-2	Bromoform	ND	50	16.	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	12	3.6	U
71-43-2	Benzene	950	12	4.0	
108-88-3	Toluene	62	62	18.	
100-41-4	Ethylbenzene	180	62	18.	
74-87-3	Chloromethane	ND	62	18.	U
74-83-9	Bromomethane	ND	62	18.	U
75-01-4	Vinyl chloride	ND	25	1.7	U
75-00-3	Chloroethane	ND	62	18.	U
75-35-4	1,1-Dichloroethene	ND	12	3.6	U

Form 1
Volatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: L1526418-03D	Date Collected	: 10/16/15 11:20
Client ID	: WW01_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/21/15 13:42
Sample Matrix	: WATER	Dilution Factor	: 25
Analytical Method	: 1,8260C	Analyst	: PD
Lab File ID	: 1021A08	Instrument ID	: ELAINE.I
Sample Amount	: 0.4 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
156-60-5	trans-1,2-Dichloroethene	ND	62	18.	U
79-01-6	Trichloroethene	ND	12	4.4	U
95-50-1	1,2-Dichlorobenzene	ND	62	18.	U
541-73-1	1,3-Dichlorobenzene	ND	62	18.	U
106-46-7	1,4-Dichlorobenzene	ND	62	18.	U
1634-04-4	Methyl tert butyl ether	ND	62	18.	U
179601-23-1	p/m-Xylene	200	62	18.	
95-47-6	o-Xylene	160	62	18.	
1330-20-7	Xylenes, Total	360	62	18.	
156-59-2	cis-1,2-Dichloroethene	ND	62	18.	U
540-59-0	1,2-Dichloroethene, Total	ND	62	18.	U
74-95-3	Dibromomethane	ND	120	25.	U
96-18-4	1,2,3-Trichloropropane	ND	62	18.	U
107-13-1	Acrylonitrile	ND	120	38.	U
100-42-5	Styrene	ND	62	18.	U
75-71-8	Dichlorodifluoromethane	ND	120	25.	U
67-64-1	Acetone	56	120	36.	J
75-15-0	Carbon disulfide	ND	120	25.	U
78-93-3	2-Butanone	ND	120	48.	U
108-05-4	Vinyl acetate	ND	120	25.	U
108-10-1	4-Methyl-2-pentanone	ND	120	25.	U
591-78-6	2-Hexanone	ND	120	25.	U
74-97-5	Bromochloromethane	ND	62	18.	U
594-20-7	2,2-Dichloropropane	ND	62	18.	U
106-93-4	1,2-Dibromoethane	ND	50	16.	U
142-28-9	1,3-Dichloropropane	ND	62	18.	U
630-20-6	1,1,1,2-Tetrachloroethane	ND	62	18.	U

Form 1
Volatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: L1526418-03D	Date Collected	: 10/16/15 11:20
Client ID	: WW01_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/21/15 13:42
Sample Matrix	: WATER	Dilution Factor	: 25
Analytical Method	: 1,8260C	Analyst	: PD
Lab File ID	: 1021A08	Instrument ID	: ELAINE.I
Sample Amount	: 0.4 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
108-86-1	Bromobenzene	ND	62	18.	U
104-51-8	n-Butylbenzene	ND	62	18.	U
135-98-8	sec-Butylbenzene	ND	62	18.	U
98-06-6	tert-Butylbenzene	ND	62	18.	U
95-49-8	o-Chlorotoluene	ND	62	18.	U
106-43-4	p-Chlorotoluene	ND	62	18.	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	62	18.	U
87-68-3	Hexachlorobutadiene	ND	62	18.	U
98-82-8	Isopropylbenzene	ND	62	18.	U
99-87-6	p-Isopropyltoluene	ND	62	18.	U
91-20-3	Naphthalene	2400	62	18.	
103-65-1	n-Propylbenzene	ND	62	18.	U
87-61-6	1,2,3-Trichlorobenzene	ND	62	18.	U
120-82-1	1,2,4-Trichlorobenzene	ND	62	18.	U
108-67-8	1,3,5-Trimethylbenzene	ND	62	18.	U
95-63-6	1,2,4-Trimethylbenzene	49	62	18.	J
123-91-1	1,4-Dioxane	ND	6200	1000	U
105-05-5	p-Diethylbenzene	ND	50	18.	U
622-96-8	p-Ethyltoluene	26	50	18.	J
95-93-2	1,2,4,5-Tetramethylbenzene	ND	50	16.	U
60-29-7	Ethyl ether	ND	62	18.	U
110-57-6	trans-1,4-Dichloro-2-butene	ND	62	18.	U

Form 1
Volatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: L1526418-04	Date Collected	: 10/16/15 00:00
Client ID	: TB01_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/21/15 11:52
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: PD
Lab File ID	: 1021A05	Instrument ID	: ELAINE.I
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.13	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
542-75-6	1,3-Dichloropropene, Total	ND	0.50	0.14	U
563-58-6	1,1-Dichloropropene	ND	2.5	0.70	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.14	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.07	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.14	U

Form 1
Volatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: L1526418-04	Date Collected	: 10/16/15 00:00
Client ID	: TB01_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/21/15 11:52
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: PD
Lab File ID	: 1021A05	Instrument ID	: ELAINE.I
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
1330-20-7	Xylenes, Total	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
540-59-0	1,2-Dichloroethene, Total	ND	2.5	0.70	U
74-95-3	Dibromomethane	ND	5.0	1.0	U
96-18-4	1,2,3-Trichloropropane	ND	2.5	0.70	U
107-13-1	Acrylonitrile	ND	5.0	1.5	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	1.5	5.0	1.5	J
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-05-4	Vinyl acetate	ND	5.0	1.0	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
594-20-7	2,2-Dichloropropane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
142-28-9	1,3-Dichloropropane	ND	2.5	0.70	U
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.5	0.70	U

Form 1
Volatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: L1526418-04	Date Collected	: 10/16/15 00:00
Client ID	: TB01_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/21/15 11:52
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: PD
Lab File ID	: 1021A05	Instrument ID	: ELAINE.I
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
108-86-1	Bromobenzene	ND	2.5	0.70	U
104-51-8	n-Butylbenzene	ND	2.5	0.70	U
135-98-8	sec-Butylbenzene	ND	2.5	0.70	U
98-06-6	tert-Butylbenzene	ND	2.5	0.70	U
95-49-8	o-Chlorotoluene	ND	2.5	0.70	U
106-43-4	p-Chlorotoluene	ND	2.5	0.70	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
87-68-3	Hexachlorobutadiene	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
99-87-6	p-Isopropyltoluene	ND	2.5	0.70	U
91-20-3	Naphthalene	ND	2.5	0.70	U
103-65-1	n-Propylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
108-67-8	1,3,5-Trimethylbenzene	ND	2.5	0.70	U
95-63-6	1,2,4-Trimethylbenzene	ND	2.5	0.70	U
123-91-1	1,4-Dioxane	ND	250	41.	U
105-05-5	p-Diethylbenzene	ND	2.0	0.70	U
622-96-8	p-Ethyltoluene	ND	2.0	0.70	U
95-93-2	1,2,4,5-Tetramethylbenzene	ND	2.0	0.65	U
60-29-7	Ethyl ether	ND	2.5	0.70	U
110-57-6	trans-1,4-Dichloro-2-butene	ND	2.5	0.70	U

Form 1
Volatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: WG832832-3	Date Collected	: NA
Client ID	: WG832832-3BLANK	Date Received	: NA
Sample Location	:	Date Analyzed	: 10/21/15 11:16
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: PD
Lab File ID	: 1021A04	Instrument ID	: ELAINE.I
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.13	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
542-75-6	1,3-Dichloropropene, Total	ND	0.50	0.14	U
563-58-6	1,1-Dichloropropene	ND	2.5	0.70	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.14	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.07	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.14	U

Form 1
Volatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: WG832832-3	Date Collected	: NA
Client ID	: WG832832-3BLANK	Date Received	: NA
Sample Location	:	Date Analyzed	: 10/21/15 11:16
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: PD
Lab File ID	: 1021A04	Instrument ID	: ELAINE.I
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
1330-20-7	Xylenes, Total	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
540-59-0	1,2-Dichloroethene, Total	ND	2.5	0.70	U
74-95-3	Dibromomethane	ND	5.0	1.0	U
96-18-4	1,2,3-Trichloropropane	ND	2.5	0.70	U
107-13-1	Acrylonitrile	ND	5.0	1.5	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	ND	5.0	1.5	U
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-05-4	Vinyl acetate	ND	5.0	1.0	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
594-20-7	2,2-Dichloropropane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
142-28-9	1,3-Dichloropropane	ND	2.5	0.70	U
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.5	0.70	U

Form 1
Volatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: WG832832-3	Date Collected	: NA
Client ID	: WG832832-3BLANK	Date Received	: NA
Sample Location	:	Date Analyzed	: 10/21/15 11:16
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: PD
Lab File ID	: 1021A04	Instrument ID	: ELAINE.I
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
108-86-1	Bromobenzene	ND	2.5	0.70	U
104-51-8	n-Butylbenzene	ND	2.5	0.70	U
135-98-8	sec-Butylbenzene	ND	2.5	0.70	U
98-06-6	tert-Butylbenzene	ND	2.5	0.70	U
95-49-8	o-Chlorotoluene	ND	2.5	0.70	U
106-43-4	p-Chlorotoluene	ND	2.5	0.70	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
87-68-3	Hexachlorobutadiene	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
99-87-6	p-Isopropyltoluene	ND	2.5	0.70	U
91-20-3	Naphthalene	ND	2.5	0.70	U
103-65-1	n-Propylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
108-67-8	1,3,5-Trimethylbenzene	ND	2.5	0.70	U
95-63-6	1,2,4-Trimethylbenzene	ND	2.5	0.70	U
123-91-1	1,4-Dioxane	ND	250	41.	U
105-05-5	p-Diethylbenzene	ND	2.0	0.70	U
622-96-8	p-Ethyltoluene	ND	2.0	0.70	U
95-93-2	1,2,4,5-Tetramethylbenzene	ND	2.0	0.65	U
60-29-7	Ethyl ether	ND	2.5	0.70	U
110-57-6	trans-1,4-Dichloro-2-butene	ND	2.5	0.70	U

Semivolatiles Data- Method 8270D

Semivolatile Sample Data

Form 1
SemiVolatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number:	170040901
Lab ID	: L1526418-01	Date Collected :	10/16/15 09:20
Client ID	: MW-S2_101615	Date Received :	10/16/15
Sample Location	: NY, NY	Date Analyzed :	10/23/15 04:14
Sample Matrix	: WATER	Date Extracted :	10/21/15
Analytical Method	: 1,8270D	Dilution Factor :	1
Lab File ID	: 26418-01	Analyst	: MY
Sample Amount	: 1000 ml	Instrument ID	: SV109.I
Extraction Method	: EPA 3510C	GC Column	: RTX-5
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	1 uL

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.21	U
111-44-4	Bis(2-chloroethyl)ether	ND	2.0	0.41	U
95-50-1	1,2-Dichlorobenzene	ND	2.0	0.30	U
541-73-1	1,3-Dichlorobenzene	ND	2.0	0.35	U
106-46-7	1,4-Dichlorobenzene	ND	2.0	0.32	U
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.48	U
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.0	U
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.89	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.36	U
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.43	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2.0	0.60	U
111-91-1	Bis(2-chloroethoxy)methane	ND	5.0	0.60	U
77-47-4	Hexachlorocyclopentadiene	ND	20	0.58	U
78-59-1	Isophorone	ND	5.0	0.79	U
98-95-3	Nitrobenzene	ND	2.0	0.40	U
86-30-6	NitrosoDiPhenylAmine(NDPA)/DPA	ND	2.0	0.34	U
621-64-7	n-Nitrosodi-n-propylamine	ND	5.0	0.64	U
117-81-7	Bis(2-Ethylhexyl)phthalate	ND	3.0	0.93	U
85-68-7	Butyl benzyl phthalate	ND	5.0	1.1	U
84-74-2	Di-n-butylphthalate	ND	5.0	0.77	U
117-84-0	Di-n-octylphthalate	ND	5.0	1.2	U
84-66-2	Diethyl phthalate	ND	5.0	0.39	U
131-11-3	Dimethyl phthalate	ND	5.0	0.33	U
92-52-4	Biphenyl	2.6	2.0	0.24	

Form 1
SemiVolatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number:	170040901
Lab ID	: L1526418-01	Date Collected	: 10/16/15 09:20
Client ID	: MW-S2_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/23/15 04:14
Sample Matrix	: WATER	Date Extracted	: 10/21/15
Analytical Method	: 1,8270D	Dilution Factor	: 1
Lab File ID	: 26418-01	Analyst	: MY
Sample Amount	: 1000 ml	Instrument ID	: SV109.I
Extraction Method	: EPA 3510C	GC Column	: RTX-5
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	1 uL

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
106-47-8	4-Chloroaniline	ND	5.0	0.84	U
88-74-4	2-Nitroaniline	ND	5.0	0.96	U
99-09-2	3-Nitroaniline	ND	5.0	0.67	U
100-01-6	4-Nitroaniline	ND	5.0	0.83	U
132-64-9	Dibenzofuran	4.7	2.0	0.22	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	10	0.36	U
98-86-2	Acetophenone	ND	5.0	0.43	U
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.78	U
59-50-7	P-Chloro-M-Cresol	ND	2.0	0.54	U
95-57-8	2-Chlorophenol	ND	2.0	0.58	U
120-83-2	2,4-Dichlorophenol	ND	5.0	0.56	U
105-67-9	2,4-Dimethylphenol	ND	5.0	0.58	U
88-75-5	2-Nitrophenol	ND	10	1.0	U
100-02-7	4-Nitrophenol	ND	10	1.1	U
51-28-5	2,4-Dinitrophenol	ND	20	1.4	U
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.4	U
108-95-2	Phenol	ND	5.0	0.27	U
95-48-7	2-Methylphenol	ND	5.0	0.70	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	5.0	0.72	U
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.75	U
65-85-0	Benzoic Acid	ND	50	1.0	U
100-51-6	Benzyl Alcohol	ND	2.0	0.68	U
86-74-8	Carbazole	7.7	2.0	0.37	

Form 1
SemiVolatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number:	170040901
Lab ID	: L1526418-02	Date Collected	: 10/16/15 12:00
Client ID	: MW-N2_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/23/15 04:39
Sample Matrix	: WATER	Date Extracted	: 10/21/15
Analytical Method	: 1,8270D	Dilution Factor	: 1
Lab File ID	: 26418-02	Analyst	: MY
Sample Amount	: 1000 ml	Instrument ID	: SV109.I
Extraction Method	: EPA 3510C	GC Column	: RTX-5
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	1 uL

CAS NO.	Parameter	ug/L Results	RL	MDL	Qualifier
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.21	U
111-44-4	Bis(2-chloroethyl)ether	ND	2.0	0.41	U
95-50-1	1,2-Dichlorobenzene	ND	2.0	0.30	U
541-73-1	1,3-Dichlorobenzene	ND	2.0	0.35	U
106-46-7	1,4-Dichlorobenzene	ND	2.0	0.32	U
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.48	U
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.0	U
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.89	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.36	U
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.43	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2.0	0.60	U
111-91-1	Bis(2-chloroethoxy)methane	ND	5.0	0.60	U
77-47-4	Hexachlorocyclopentadiene	ND	20	0.58	U
78-59-1	Isophorone	ND	5.0	0.79	U
98-95-3	Nitrobenzene	ND	2.0	0.40	U
86-30-6	NitrosoDiPhenylAmine(NDPA)/DPA	ND	2.0	0.34	U
621-64-7	n-Nitrosodi-n-propylamine	ND	5.0	0.64	U
117-81-7	Bis(2-Ethylhexyl)phthalate	ND	3.0	0.93	U
85-68-7	Butyl benzyl phthalate	ND	5.0	1.1	U
84-74-2	Di-n-butylphthalate	ND	5.0	0.77	U
117-84-0	Di-n-octylphthalate	ND	5.0	1.2	U
84-66-2	Diethyl phthalate	ND	5.0	0.39	U
131-11-3	Dimethyl phthalate	ND	5.0	0.33	U
92-52-4	Biphenyl	20	2.0	0.24	

Form 1
SemiVolatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number:	170040901
Lab ID	: L1526418-02	Date Collected	: 10/16/15 12:00
Client ID	: MW-N2_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/23/15 04:39
Sample Matrix	: WATER	Date Extracted	: 10/21/15
Analytical Method	: 1,8270D	Dilution Factor	: 1
Lab File ID	: 26418-02	Analyst	: MY
Sample Amount	: 1000 ml	Instrument ID	: SV109.I
Extraction Method	: EPA 3510C	GC Column	: RTX-5
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	1 uL

CAS NO.	Parameter	ug/L Results	RL	MDL	Qualifier
106-47-8	4-Chloroaniline	ND	5.0	0.84	U
88-74-4	2-Nitroaniline	ND	5.0	0.96	U
99-09-2	3-Nitroaniline	ND	5.0	0.67	U
100-01-6	4-Nitroaniline	ND	5.0	0.83	U
132-64-9	Dibenzofuran	39	2.0	0.22	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	10	0.36	U
98-86-2	Acetophenone	12	5.0	0.43	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.78	U
59-50-7	P-Chloro-M-Cresol	ND	2.0	0.54	U
95-57-8	2-Chlorophenol	ND	2.0	0.58	U
120-83-2	2,4-Dichlorophenol	ND	5.0	0.56	U
105-67-9	2,4-Dimethylphenol	110	5.0	0.58	
88-75-5	2-Nitrophenol	ND	10	1.0	U
100-02-7	4-Nitrophenol	ND	10	1.1	U
51-28-5	2,4-Dinitrophenol	ND	20	1.4	U
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.4	U
108-95-2	Phenol	3.0	5.0	0.27	J
95-48-7	2-Methylphenol	39	5.0	0.70	
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	31	5.0	0.72	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.75	U
65-85-0	Benzoic Acid	ND	50	1.0	U
100-51-6	Benzyl Alcohol	ND	2.0	0.68	U
86-74-8	Carbazole	88	2.0	0.37	

Form 1
SemiVolatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number:	170040901
Lab ID	: WG832884-1	Date Collected	: NA
Client ID	: WG832884-1BLANK	Date Received	: NA
Sample Location	:	Date Analyzed	: 10/22/15 19:21
Sample Matrix	: WATER	Date Extracted	: 10/21/15
Analytical Method	: 1,8270D	Dilution Factor	: 1
Lab File ID	: 832884-1	Analyst	: MY
Sample Amount	: 1000 ml	Instrument ID	: SV109.I
Extraction Method	: EPA 3510C	GC Column	: RTX-5
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	1 uL

CAS NO.	Parameter	ug/L Results	RL	MDL	Qualifier
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.21	U
111-44-4	Bis(2-chloroethyl)ether	ND	2.0	0.41	U
95-50-1	1,2-Dichlorobenzene	ND	2.0	0.30	U
541-73-1	1,3-Dichlorobenzene	ND	2.0	0.35	U
106-46-7	1,4-Dichlorobenzene	ND	2.0	0.32	U
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.48	U
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.0	U
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.89	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.36	U
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.43	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2.0	0.60	U
111-91-1	Bis(2-chloroethoxy)methane	ND	5.0	0.60	U
77-47-4	Hexachlorocyclopentadiene	ND	20	0.58	U
78-59-1	Isophorone	ND	5.0	0.79	U
98-95-3	Nitrobenzene	ND	2.0	0.40	U
86-30-6	NitrosoDiPhenylAmine(NDPA)/DPA	ND	2.0	0.34	U
621-64-7	n-Nitrosodi-n-propylamine	ND	5.0	0.64	U
117-81-7	Bis(2-Ethylhexyl)phthalate	ND	3.0	0.93	U
85-68-7	Butyl benzyl phthalate	ND	5.0	1.1	U
84-74-2	Di-n-butylphthalate	ND	5.0	0.77	U
117-84-0	Di-n-octylphthalate	ND	5.0	1.2	U
84-66-2	Diethyl phthalate	ND	5.0	0.39	U
131-11-3	Dimethyl phthalate	ND	5.0	0.33	U
92-52-4	Biphenyl	ND	2.0	0.24	U

Form 1
SemiVolatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number:	170040901
Lab ID	: WG832884-1	Date Collected	: NA
Client ID	: WG832884-1BLANK	Date Received	: NA
Sample Location	:	Date Analyzed	: 10/22/15 19:21
Sample Matrix	: WATER	Date Extracted	: 10/21/15
Analytical Method	: 1,8270D	Dilution Factor	: 1
Lab File ID	: 832884-1	Analyst	: MY
Sample Amount	: 1000 ml	Instrument ID	: SV109.I
Extraction Method	: EPA 3510C	GC Column	: RTX-5
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	1 uL

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
106-47-8	4-Chloroaniline	ND	5.0	0.84	U
88-74-4	2-Nitroaniline	ND	5.0	0.96	U
99-09-2	3-Nitroaniline	ND	5.0	0.67	U
100-01-6	4-Nitroaniline	ND	5.0	0.83	U
132-64-9	Dibenzofuran	ND	2.0	0.22	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	10	0.36	U
98-86-2	Acetophenone	ND	5.0	0.43	U
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.78	U
59-50-7	P-Chloro-M-Cresol	ND	2.0	0.54	U
95-57-8	2-Chlorophenol	ND	2.0	0.58	U
120-83-2	2,4-Dichlorophenol	ND	5.0	0.56	U
105-67-9	2,4-Dimethylphenol	ND	5.0	0.58	U
88-75-5	2-Nitrophenol	ND	10	1.0	U
100-02-7	4-Nitrophenol	ND	10	1.1	U
51-28-5	2,4-Dinitrophenol	ND	20	1.4	U
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.4	U
108-95-2	Phenol	ND	5.0	0.27	U
95-48-7	2-Methylphenol	ND	5.0	0.70	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	5.0	0.72	U
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.75	U
65-85-0	Benzoic Acid	ND	50	1.0	U
100-51-6	Benzyl Alcohol	ND	2.0	0.68	U
86-74-8	Carbazole	ND	2.0	0.37	U

Semivolatiles Data- Method 8270C-SIM

Semivolatile Sample Data

Form 1
SemiVolatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number:	170040901
Lab ID	: L1526418-01D	Date Collected :	10/16/15 09:20
Client ID	: MW-S2_101615	Date Received :	10/16/15
Sample Location	: NY, NY	Date Analyzed :	10/22/15 17:10
Sample Matrix	: WATER	Date Extracted :	10/21/15
Analytical Method	: 1,8270D-SIM	Dilution Factor :	5
Lab File ID	: 26418-01	Analyst	: KV
Sample Amount	: 1000 ml	Instrument ID	: MINDY.I
Extraction Method	: EPA 3510C	GC Column	: RXI-5SilMS
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	1 uL

CAS NO.	Parameter	ug/L Results	RL	MDL	Qualifier
83-32-9	Acenaphthene	17	1.0	0.18	
91-58-7	2-Chloronaphthalene	ND	1.0	0.18	U
206-44-0	Fluoranthene	5.3	1.0	0.19	
87-68-3	Hexachlorobutadiene	ND	2.5	0.18	U
91-20-3	Naphthalene	23	1.0	0.22	
56-55-3	Benzo(a)anthracene	2.2	1.0	0.08	
50-32-8	Benzo(a)pyrene	2.2	1.0	0.20	
205-99-2	Benzo(b)fluoranthene	1.7	1.0	0.08	
207-08-9	Benzo(k)fluoranthene	0.65	1.0	0.21	J
218-01-9	Chrysene	2.1	1.0	0.19	
208-96-8	Acenaphthylene	3.2	1.0	0.18	
120-12-7	Anthracene	2.5	1.0	0.18	
191-24-2	Benzo(ghi)perylene	1.3	1.0	0.21	
86-73-7	Fluorene	4.2	1.0	0.18	
85-01-8	Phenanthrene	5.4	1.0	0.08	
53-70-3	Dibenzo(a,h)anthracene	0.24	1.0	0.20	J
193-39-5	Indeno(1,2,3-cd)Pyrene	0.83	1.0	0.20	J
129-00-0	Pyrene	8.1	1.0	0.20	
91-57-6	2-Methylnaphthalene	3.8	1.0	0.22	
87-86-5	Pentachlorophenol	ND	4.0	1.1	U
118-74-1	Hexachlorobenzene	ND	4.0	0.16	U
67-72-1	Hexachloroethane	ND	4.0	0.15	U

Form 1
SemiVolatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number:	170040901
Lab ID	: L1526418-02D	Date Collected	: 10/16/15 12:00
Client ID	: MW-N2_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/22/15 18:32
Sample Matrix	: WATER	Date Extracted	: 10/21/15
Analytical Method	: 1,8270D-SIM	Dilution Factor	: 200
Lab File ID	: 6418-2D	Analyst	: KV
Sample Amount	: 1000 ml	Instrument ID	: MINDY.I
Extraction Method	: EPA 3510C	GC Column	: RXI-5SilMS
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	1 uL

CAS NO.	Parameter	ug/L Results	RL	MDL	Qualifier
83-32-9	Acenaphthene	77	40	7.0	
91-58-7	2-Chloronaphthalene	ND	40	7.0	U
206-44-0	Fluoranthene	12	40	7.6	J
87-68-3	Hexachlorobutadiene	ND	100	7.2	U
91-20-3	Naphthalene	2400	40	8.6	
56-55-3	Benzo(a)anthracene	4.7	40	3.2	J
50-32-8	Benzo(a)pyrene	ND	40	7.8	U
205-99-2	Benzo(b)fluoranthene	ND	40	3.2	U
207-08-9	Benzo(k)fluoranthene	ND	40	8.4	U
218-01-9	Chrysene	ND	40	7.6	U
208-96-8	Acenaphthylene	ND	40	7.0	U
120-12-7	Anthracene	7.9	40	7.0	J
191-24-2	Benzo(ghi)perylene	ND	40	8.4	U
86-73-7	Fluorene	30	40	7.4	J
85-01-8	Phenanthrene	48	40	3.0	
53-70-3	Dibenzo(a,h)anthracene	ND	40	7.8	U
193-39-5	Indeno(1,2,3-cd)Pyrene	ND	40	8.0	U
129-00-0	Pyrene	8.8	40	8.0	J
91-57-6	2-Methylnaphthalene	60	40	9.0	
87-86-5	Pentachlorophenol	ND	160	44.	U
118-74-1	Hexachlorobenzene	ND	160	6.4	U
67-72-1	Hexachloroethane	ND	160	6.0	U

Form 1
SemiVolatile Organics

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number:	170040901
Lab ID	: WG832885-1	Date Collected :	NA
Client ID	: WG832885-1BLANK	Date Received :	NA
Sample Location	:	Date Analyzed :	10/22/15 12:10
Sample Matrix	: WATER	Date Extracted :	10/21/15
Analytical Method	: 1,8270D-SIM	Dilution Factor :	1
Lab File ID	: 832885-1	Analyst	: KV
Sample Amount	: 1000 ml	Instrument ID	: MINDY.I
Extraction Method	: EPA 3510C	GC Column	: RXI-5SilMS
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	1 uL

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
83-32-9	Acenaphthene	ND	0.20	0.04	U
91-58-7	2-Chloronaphthalene	ND	0.20	0.04	U
206-44-0	Fluoranthene	ND	0.20	0.04	U
87-68-3	Hexachlorobutadiene	ND	0.50	0.04	U
91-20-3	Naphthalene	ND	0.20	0.04	U
56-55-3	Benzo(a)anthracene	ND	0.20	0.02	U
50-32-8	Benzo(a)pyrene	ND	0.20	0.04	U
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.02	U
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.04	U
218-01-9	Chrysene	ND	0.20	0.04	U
208-96-8	Acenaphthylene	ND	0.20	0.04	U
120-12-7	Anthracene	ND	0.20	0.04	U
191-24-2	Benzo(ghi)perylene	ND	0.20	0.04	U
86-73-7	Fluorene	ND	0.20	0.04	U
85-01-8	Phenanthrene	ND	0.20	0.02	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.04	U
193-39-5	Indeno(1,2,3-cd)Pyrene	ND	0.20	0.04	U
129-00-0	Pyrene	ND	0.20	0.04	U
91-57-6	2-Methylnaphthalene	ND	0.20	0.05	U
87-86-5	Pentachlorophenol	ND	0.80	0.22	U
118-74-1	Hexachlorobenzene	ND	0.80	0.03	U
67-72-1	Hexachloroethane	ND	0.80	0.03	U

Metals

Inorganic Data
(ICPMS Analysis)

Form 1
METALS

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: L1526418-01	Date Collected	: 10/16/15 09:20
Client ID	: MW-S2_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/21/15 16:28
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,6020A	Analyst	: TT
Lab File ID	: wg832810.pdf	Instrument ID	: ICPMSQ
Sample Amount	: 50ml	%Solids	: N/A
Digestion Method	: EPA 3005A	Date Digested	: 10/17/15

		mg/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
7429-90-5	Aluminum, Total	0.392	0.010	0.002	
7440-36-0	Antimony, Total	0.0002	0.0020	0.0001	J
7440-38-2	Arsenic, Total	0.0054	0.0005	0.0001	
7440-39-3	Barium, Total	0.2067	0.0005	0.0001	
7440-41-7	Beryllium, Total	ND	0.0005	0.0002	U
7440-43-9	Cadmium, Total	ND	0.0002	0.0001	U
7440-47-3	Chromium, Total	0.0022	0.0010	0.0003	
7440-48-4	Cobalt, Total	0.0027	0.0005	0.0001	
7440-50-8	Copper, Total	0.0020	0.0010	0.0003	
7439-89-6	Iron, Total	5.80	0.050	0.012	
7439-92-1	Lead, Total	0.0133	0.0010	0.0001	
7440-02-0	Nickel, Total	0.0020	0.0005	0.0001	
7440-09-7	Potassium, Total	21.6	0.100	0.019	
7782-49-2	Selenium, Total	ND	0.005	0.001	U
7440-22-4	Silver, Total	ND	0.0004	0.0001	U
7440-28-0	Thallium, Total	ND	0.0005	0.0001	U
7440-62-2	Vanadium, Total	0.0030	0.0050	0.0006	J
7440-66-6	Zinc, Total	0.0078	0.0100	0.0026	J

Form 1
METALS

Client	: Langan Engineering & Environmental	**Lab Number**	: L1526418
Project Name	: RIVER PLACE I & II	**Project Number**	: 170040901
Lab ID	: L1526418-01	**Date Collected**	: 10/16/15 09:20
Client ID	: MW-S2_101615	**Date Received**	: 10/16/15
Sample Location	: NY, NY	**Date Analyzed**	: 10/21/15 16:16
Sample Matrix	: WATER	**Dilution Factor**	: 20
Analytical Method	: 1,6020A	**Analyst**	: TT
Lab File ID	: wg832810.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 10/17/15

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7440-70-2	Calcium, Total	217	2.00	0.640	
7439-95-4	Magnesium, Total	81.1	1.40	0.446	
7439-96-5	Manganese, Total	0.5297	0.0200	0.0060	
7440-23-5	Sodium, Total	56.6	2.00	0.322	

Form 1
METALS

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: L1526418-02	Date Collected	: 10/16/15 12:00
Client ID	: MW-N2_101615	Date Received	: 10/16/15
Sample Location	: NY, NY	Date Analyzed	: 10/21/15 16:31
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,6020A	Analyst	: TT
Lab File ID	: wg832810.pdf	Instrument ID	: ICPMSQ
Sample Amount	: 50ml	%Solids	: N/A
Digestion Method	: EPA 3005A	Date Digested	: 10/17/15

		mg/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
7429-90-5	Aluminum, Total	0.025	0.010	0.002	
7440-36-0	Antimony, Total	0.0006	0.0020	0.0001	J
7440-38-2	Arsenic, Total	0.0027	0.0005	0.0001	
7440-39-3	Barium, Total	0.1745	0.0005	0.0001	
7440-41-7	Beryllium, Total	ND	0.0005	0.0002	U
7440-43-9	Cadmium, Total	ND	0.0002	0.0001	U
7440-47-3	Chromium, Total	0.0016	0.0010	0.0003	
7440-48-4	Cobalt, Total	0.0060	0.0005	0.0001	
7440-50-8	Copper, Total	0.0011	0.0010	0.0003	
7439-89-6	Iron, Total	1.62	0.050	0.012	
7439-92-1	Lead, Total	0.0006	0.0010	0.0001	J
7439-96-5	Manganese, Total	0.4365	0.0010	0.0003	
7440-02-0	Nickel, Total	0.0013	0.0005	0.0001	
7440-09-7	Potassium, Total	30.6	0.100	0.019	
7782-49-2	Selenium, Total	ND	0.005	0.001	U
7440-22-4	Silver, Total	ND	0.0004	0.0001	U
7440-28-0	Thallium, Total	ND	0.0005	0.0001	U
7440-62-2	Vanadium, Total	0.0019	0.0050	0.0006	J
7440-66-6	Zinc, Total	0.0035	0.0100	0.0026	J

Form 1
METALS

Client	: Langan Engineering & Environmental	**Lab Number**	: L1526418
Project Name	: RIVER PLACE I & II	**Project Number**	: 170040901
Lab ID	: L1526418-02	**Date Collected**	: 10/16/15 12:00
Client ID	: MW-N2_101615	**Date Received**	: 10/16/15
Sample Location	: NY, NY	**Date Analyzed**	: 10/21/15 16:34
Sample Matrix	: WATER	**Dilution Factor**	: 20
Analytical Method	: 1,6020A	**Analyst**	: TT
Lab File ID	: wg832810.pdf	**Instrument ID**	: ICPMSQ
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 10/17/15

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7440-70-2	Calcium, Total	164	2.00	0.640	
7439-95-4	Magnesium, Total	59.6	1.40	0.446	
7440-23-5	Sodium, Total	189	2.00	0.322	

Inorganic Data
(Mercury Analysis)

Form 1
METALS

Client	: Langan Engineering & Environmental	**Lab Number**	: L1526418
Project Name	: RIVER PLACE I & II	**Project Number**	: 170040901
Lab ID	: L1526418-01	**Date Collected**	: 10/16/15 09:20
Client ID	: MW-S2_101615	**Date Received**	: 10/16/15
Sample Location	: NY, NY	**Date Analyzed**	: 10/20/15 21:16
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: EA
Lab File ID	: Hg4102015B.pcl	**Instrument ID**	: FIMS4
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 10/20/15

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Total	0.00012	0.00020	0.00006	J

Form 1
METALS

Client	: Langan Engineering & Environmental	**Lab Number**	: L1526418
Project Name	: RIVER PLACE I & II	**Project Number**	: 170040901
Lab ID	: L1526418-02	**Date Collected**	: 10/16/15 12:00
Client ID	: MW-N2_101615	**Date Received**	: 10/16/15
Sample Location	: NY, NY	**Date Analyzed**	: 10/20/15 21:17
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,7470A	**Analyst**	: EA
Lab File ID	: Hg4102015B.pcl	**Instrument ID**	: FIMS4
Sample Amount	: 25ml	**%Solids**	: N/A
Digestion Method	: EPA 7470A	**Date Digested**	: 10/20/15

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7439-97-6	Mercury, Total	ND	0.00020	0.00006	U

Wet Chemistry

Cyanide Analysis

Results

Form 1
WETCHEM

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: WG832054-1	Date Collected	: NA
Client ID	: WG832054-1BLANK	Date Received	: NA
Sample Location	:	Date Analyzed	: 10/19/15 11:46
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 64,9014(M)	Analyst	: JO
Lab File ID	: 151019-A	Instrument ID	: LACHAT
Sample Amount	:	%Solids	: N/A
Digestion Method	:	Date Digested	: 10/19/15

		mg/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
57-12-5	Cyanide, Physiologically Available	ND	0.005	0.00005	U

Form 1
WETCHEM

Client	: Langan Engineering & Environmental	Lab Number	: L1526418
Project Name	: RIVER PLACE I & II	Project Number	: 170040901
Lab ID	: WG832054-4	Date Collected	:
Client ID	: Negative Laboratory	Date Received	:
Sample Location	:	Date Analyzed	: 10/19/15 11:47
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 64,9014(M)	Analyst	: joko
Lab File ID	: 151019-A	Instrument ID	: LACHAT
Sample Amount	:	%Solids	: N/A
Digestion Method	:	Date Digested	: 10/19/15

		mg/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
57-12-5	Cyanide, Physiologically Available	0.032	.005	0.00005	

Form 1
WETCHEM

Client	: Langan Engineering & Environmental	**Lab Number**	: L1526418
Project Name	: RIVER PLACE I & II	**Project Number**	: 170040901
Lab ID	: WG832054-5	**Date Collected**	: 10/16/15 09:20
Client ID	: MW-S2_101615DUP	**Date Received**	: 10/16/15
Sample Location	:	**Date Analyzed**	: 10/19/15 11:56
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 64,9014(M)	**Analyst**	: joko
Lab File ID	: 151019-A	**Instrument ID**	: LACHAT
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 10/19/15

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
57-12-5	Cyanide, Physiologically Available	0.085	0.005	0.00005	

Form 1
WETCHEM

Client	: Langan Engineering & Environmental	**Lab Number**	: L1526418
Project Name	: RIVER PLACE I & II	**Project Number**	: 170040901
Lab ID	: L1526418-01	**Date Collected**	: 10/16/15 09:20
Client ID	: MW-S2_101615	**Date Received**	: 10/16/15
Sample Location	: NY, NY	**Date Analyzed**	: 10/19/15 11:56
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 64,9014(M)	**Analyst**	: JO
Lab File ID	: 151019-A	**Instrument ID**	: LACHAT
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 10/19/15

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
57-12-5	Cyanide, Physiologically Available	0.060	0.005	0.00005	

Form 1
WETCHEM

Client	: Langan Engineering & Environmental	**Lab Number**	: L1526418
Project Name	: RIVER PLACE I & II	**Project Number**	: 170040901
Lab ID	: L1526418-02	**Date Collected**	: 10/16/15 12:00
Client ID	: MW-N2_101615	**Date Received**	: 10/16/15
Sample Location	: NY, NY	**Date Analyzed**	: 10/19/15 11:52
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 64,9014(M)	**Analyst**	: JO
Lab File ID	: 151019-A	**Instrument ID**	: LACHAT
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 10/19/15

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
57-12-5	Cyanide, Physiologically Available	0.037	0.005	0.00005	

Form 1
WETCHEM

Client	: Langan Engineering & Environmental	**Lab Number**	: L1526418
Project Name	: RIVER PLACE I & II	**Project Number**	: 170040901
Lab ID	: WG832585-1	**Date Collected**	: NA
Client ID	: WG832585-1BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 10/21/15 12:57
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,9010C/9012B	**Analyst**	: JO
Lab File ID	: 151021-E	**Instrument ID**	: LACHAT
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 10/20/15

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
57-12-5	Cyanide, Total	ND	0.005	0.001	U

Form 1
WETCHEM

Client	: Langan Engineering & Environmental	**Lab Number**	: L1526418
Project Name	: RIVER PLACE I & II	**Project Number**	: 170040901
Lab ID	: L1526418-01	**Date Collected**	: 10/16/15 09:20
Client ID	: MW-S2_101615	**Date Received**	: 10/16/15
Sample Location	: NY, NY	**Date Analyzed**	: 10/21/15 13:03
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,9010C/9012B	**Analyst**	: JO
Lab File ID	: 151021-E	**Instrument ID**	: LACHAT
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 10/20/15

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
57-12-5	Cyanide, Total	0.135	0.005	0.001	

Form 1
WETCHEM

Client	: Langan Engineering & Environmental	**Lab Number**	: L1526418
Project Name	: RIVER PLACE I & II	**Project Number**	: 170040901
Lab ID	: L1526418-02	**Date Collected**	: 10/16/15 12:00
Client ID	: MW-N2_101615	**Date Received**	: 10/16/15
Sample Location	: NY, NY	**Date Analyzed**	: 10/21/15 13:04
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,9010C/9012B	**Analyst**	: JO
Lab File ID	: 151021-E	**Instrument ID**	: LACHAT
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 10/20/15

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
57-12-5	Cyanide, Total	0.156	0.005	0.001	

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

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

Serial No.: 48541

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

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

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

Serial No.: 48541

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:

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

Serial No.: 48541

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

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

Serial No.: 48542

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

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

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

Serial No.: 48542

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

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

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

Serial No.: 48542

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

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

Serial No.: 48542

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

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

Serial No.: 48542

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

NY Lab Id No: 11148

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

Volatile Aromatics	
1,3-Dichlorobenzene	EPA 624
	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

Serial No.: 48542

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 486-5570 to verify the laboratory's accreditation status.

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

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		

Serial No.: 48542

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

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

Serial No.: 48542

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

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

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

Serial No.: 48542

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No. 11148

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

Wastewater 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)

Serial No.: 48542

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

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:

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

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

Serial No.: 48543

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

All approved analytes are listed below:

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

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

Serial No.: 48543

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

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

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:

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

Serial No.: 48543

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11148

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

Serial No.: 48543

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11627

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

ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below:

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

Serial No:: 49076

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11627

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

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

Nitroaromatics and Isophorone	
2,4-Dinitrotoluene	EPA 8270D
2,6-Dinitrotoluene	EPA 8270D
Isophorone	EPA 8270D
Nitrobenzene	EPA 8270D
Nitrosoamines	
N-Nitrosodimethylamine	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 8270D
N-Nitrosodiphenylamine	EPA 8270D
Organophosphate Pesticides	
Atrazine	EPA 8270D
Petroleum Hydrocarbons	
Diesel Range Organics	EPA 8015D
Phthalate Esters	
Benzyl butyl phthalate	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 8270D
Diethyl phthalate	EPA 8270D
Dimethyl phthalate	EPA 8270D
Di-n-butyl phthalate	EPA 8270D
Di-n-octyl phthalate	EPA 8270D
Polychlorinated Biphenyls	
PCB-1188	EPA 8082A
PCB-1268	EPA 8082A
PCB-1016	EPA 8082A

Serial No.: 49076

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

NY Lab Id No. 11627

MR. JOSEPH L. WATKINS
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

Serial No.: 49076

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11627

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

Semi-Volatile Organics

Caprolactam	EPA 8270D
Dibenzofuran	EPA 8270D

Wastewater Metals I

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

Wastewater Metals II

Aluminum, Total	EPA 6020A
Antimony, Total	EPA 6020A
Arsenic, Total	EPA 6020A
Beryllium, Total	EPA 6020A
Mercury, Low Level	EPA 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.: 49076

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

NY Lab Id No. 11627

MR. JOSEPH L. WATKINS
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 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

Serial No.: 49077

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab Id No: 11627

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

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

Serial No.: 49077

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

NY Lab Id No. 11627

MR. JOSEPH L. WATKINS
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 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

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

Serial No.: 49077

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

NY Lab Id No. 11627

MR. JOSEPH L. WATKINS
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 AIR AND EMISSIONS
All approved analytes are listed below:

Acrylates	
Acetonitrile	EPA TO-15
Acrylonitrile	EPA TO-15
Methyl methacrylate	EPA TO-15
Chlorinated Hydrocarbons	
1,2,4-Trichlorobenzene	EPA TO-15
Hexachlorobutadiene	EPA TO-15
Polychlorinated Biphenyls	
PCB-1016	EPA TO-10A
PCB-1221	EPA TO-10A
PCB-1232	EPA TO-10A
PCB-1242	EPA TO-10A
PCB-1248	EPA TO-10A
PCB-1254	EPA TO-10A
PCB-1260	EPA TO-10A
PCB-1262	EPA TO-10A
PCB-1268	EPA TO-10A
Polynuclear Aromatics	
Naphthalene	EPA TO-15
Purgeable Aromatics	
1,2,4-Trimethylbenzene	EPA TO-15
1,2-Dichlorobenzene	EPA TO-15
1,3,5-Trimethylbenzene	EPA TO-15
1,3-Dichlorobenzene	EPA TO-15
1,4-Dichlorobenzene	EPA TO-15
Purgeable Aromatics	
2-Chlorotoluene	EPA TO-15
Benzene	EPA TO-15
Chlorobenzene	EPA TO-15
Ethyl benzene	EPA TO-15
Isopropylbenzene	EPA TO-15
m/p-Xylenes	EPA TO-15
o-Xylene	EPA TO-15
Styrene	EPA TO-15
Toluene	EPA TO-15
Total Xylenes	EPA TO-15
Purgeable Halocarbons	
1,1,1-Trichloroethane	EPA TO-15
1,1,2,2-Tetrachloroethane	EPA TO-15
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA TO-15
1,1,2-Trichloroethane	EPA TO-15
1,1-Dichloroethane	EPA TO-15
1,1-Dichloroethene	EPA TO-15
1,2-Dibromo-3-chloropropane	EPA TO-15
1,2-Dibromoethane	EPA TO-15
1,2-Dichloroethane	EPA TO-15
1,2-Dichloropropane	EPA TO-15
3-Chloropropene (Allyl chloride)	EPA TO-15
Bromodichloromethane	EPA TO-15
Bromoform	EPA TO-15
Bromomethane	EPA TO-15

Serial No.: 49078

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

Serial No.: 49078