

September 4, 2015

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

RE: Site Management Plan Annual Review - August 2015

> West 42<sup>nd</sup> Street – River Place I West 41st - West 42nd Streets New York, New York 110036 NYSDEC BCP Site No. C231024 Langan Project No.: 170040901

Dear Mr. MacNeal:

This letter documents ongoing compliance with the July 2006 Site Management Plan (SMP) that was prepared in accordance with the New York State Brownfield Cleanup Program (BCP) for the River Place I property (the Site). The Site is located between West 41st and West 42nd Streets and 11th and 12th Avenues on the west side of Manhattan, New York. The last review letter was submitted to you and accepted in September 2014.

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

#### Institutional Control/Engineering Controls (IC/EC) Inspection

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

Cover System - The site cover system includes the building foundation slabs, asphalt parking lots, concrete walkways, and top soil used in landscaped areas. The construction of the cover system is complete. The building slab and the park area were inspected by Langan on August 6, 2015 and were observed to be intact.

During the inspection, Langan was informed that sidewalk pavers located on the West 41st Street sidewalk (south of the fenced area) were recently repaired. During the repair, a fill line for an aboveground storage tank (AST) was observed, and exhibited initial stages of corrosion. The AST associated with the fill line is located within the River Place I building. The AST fill line was located about 1.5 feet below sidewalk grade within the 4-foot clean soil cover. Soil was removed to expose and repair the line, to a distance that extended from the sidewalk to the River Place I building (about 20 feet). The soil and sidewalk pavers were then replaced.

Photographs of site cover are provided as Attachment B.

<u>Environmental Easement</u> – Groundwater is not used for any purpose. Land use remains as multi-story residential.

## **Quarterly Groundwater Monitoring**

Quarterly groundwater monitoring was required for the first two years following completion of the remedial construction, as specified in the SMP. On February 28 and March 7, 2009, two groundwater monitoring wells were installed in the park area at the site. Langan performed the fourth annual monitoring event on October 14, 2014. The fourth annual groundwater monitoring report is included as Attachment C. The next annual groundwater monitoring event is anticipated to occur in October 2015.

### **Annual Indoor Air Monitoring**

The SMP required annual indoor air sampling in River Place I for three years. The final round of indoor air sampling was conducted by GCI Environmental Advisory, Inc. on December 22, 2011. The Ambient/Indoor Air Monitoring Assessment Survey report was provided as Attachment E in the June 2011 SMP Annual Review document. On August 31, 2011, NYSDEC agreed that no further indoor air sampling would be required after the December 2011 event.

### Closing

The SMP is being implemented in accordance with the schedules discussed above. All institutional and engineering controls are in place, have not been altered and are still effective. Should you have any questions, please contact me at 212-479-5404.

Kindest Regards,

Langan Engineering & Environmental Services, P.C.

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Joel B. Landes, P.E. Senior Consultant

Enclosures:

Attachment A NYSDEC Institutional and Engineering Controls Certification Form

Attachment B Site Cover Photographs

Attachment C Annual Groundwater Monitoring Report- 2014

Cc: William R. Dacunto - River Place 1 LLC

Richard Rienzo - Con Edison



## **Attachment A**

NYSDEC Institutional and Engineering Controls Certification Forms



# Enclosure 1 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION Site Management Periodic Review Report Notice Institutional and Engineering Controls Certification Form



Sif	te No.	Site Details C231024	Box 1	
Sit	te Name CE	E - W 42nd St River Place I		
City	te Address: 6 ty/Town: Ne bunty: New Yo te Acreage: 2	ork		
Re	porting Peric	Od: September 5, 2014 to September 5, 2015		
		en e	i.	
			YES	NO
1.	Is the inform	mation above correct?		
	If NO, inclu	ide handwritten above or on a separate sheet.		e 7 W
2.		or all of the site property been sold, subdivided, merged, or undergone a nendment during this Reporting Period?		
3.		peen any change of use at the site during this Reporting Period RR 375-1.11(d))?		
4.	Have any fe for or at the	ederal, state, and/or local permits (e.g., building, discharge) been issued e property during this Reporting Period?		×
	If you answ that docum	wered YES to questions 2 thru 4, include documentation or evidence nentation has been previously submitted with this certification form.		
5.	Is the site of	currently undergoing development?		
-			Box 2	
				NO
6.	Is the currer Restricted-F	nt site use consistent with the use(s) listed below? Residential, Commercial, and Industrial		
7.	Are all ICs/E	ECs in place and functioning as designed?		
	IF TH	IE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below an DO NOT COMPLETE THE REST OF THIS FORM.	ıd	
A C	orrective Me	easures Work Plan must be submitted along with this form to address the	se issu	es.
Sigr	nature of Owr	ner, Remedial Party or Designated Representative Date		
				0
				,

	Box 2	A							
Has any new information revealed that assumptions made in the Qualitative Exposure	YES	NO							
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.									
<ol> <li>Are the assumptions in the Qualitative Exposure Assessment still valid?</li> <li>(The Qualitative Exposure Assessment must be certified every five years)</li> </ol>									
If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.									
SITE ŃO. C231024	Вох	3							
Description of Institutional Controls									
Owner Institutional Control River Place I, LLC									
Ground Water Use Res Landuse Restriction Site Management Plan Soil Management Plan	triction								
	Box	4							
Description of Engineering Controls									
Engineering Control 0890001 Subsurface Barriers	1								
Control Description for Site No. C231024									
Parcel: 10890001  Annual reports on quarterly groundwater monitoring and annual indoor air monitoring event as well as an annual certification that the ground cover is intact as well as the continued effect the newly-installed vapor barrier and that the gourndwater restrictions are still in force.	s arė requ ectiveness	ired of							

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Roy	5
DOX	0

	Periodic Review Report (PRR) Certification Statements		
1.	I certify by checking "YES" below that:	2	
(06))	<ul> <li>a) the Periodic Review report and all attachments were prepared under the direct reviewed by, the party making the certification;</li> </ul>	ion of, a	and
	<ul> <li>b) to the best of my knowledge and belief, the work and conclusions described in are in accordance with the requirements of the site remedial program, and general engineering practices; and the information presented is accurate and compete.</li> </ul>		
	engineering practices, and the information procedure to decarate and compete.	YES	NO
		X	
2.	If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that following statements are true:	each Ins	titutional
	(a) the Institutional Control and/or Engineering Control(s) employed at this site is the date that the Control was put in-place, or was last approved by the Departmen		ged since
	(b) nothing has occurred that would impair the ability of such Control, to protect p the environment;	ublic he	alth and
	(c) access to the site will continue to be provided to the Department, to evaluate t including access to evaluate the continued maintenance of this Control;	he reme	edy,
	(d) nothing has occurred that would constitute a violation or failure to comply with Management Plan for this Control; and	the Site	<b>)</b>
	(e) if a financial assurance mechanism is required by the oversight document for mechanism remains valid and sufficient for its intended purpose established in the	the site,	the ent.
		YES	NO
	IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM.		
	A Corrective Measures Work Plan must be submitted along with this form to address the	ese issu	ies.
			361
-	Signature of Owner, Remedial Party or Designated Representative Date		
			,
			¥

### IC CERTIFICATIONS SITE NO. C231024

Box 6

## SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

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

Print name at 250 GREENWILL ST. NY NY print business address
print name print business address
am certifying as REMEDIAL PARTY (Owner or Remedial Party)
for the Site named in the Site Details Section of this form.  9/3/15  Signature of Owner or Remedial Party Rendering Certification  Date
IC/EC CERTIFICATIONS
Box 7 Signature
I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.
Joel B. Landes at 21 Penn Plaza, New York, New York 10001 print name print business address
am certifying as a for the Remedial Party  (Owner or Remedial Party)
Signature of , for the Owner or Remedial Party, Rendering Certification  9(7/15)  Stamp Date (Required for PE)

# **Attachment B**

Site Cover Photographs

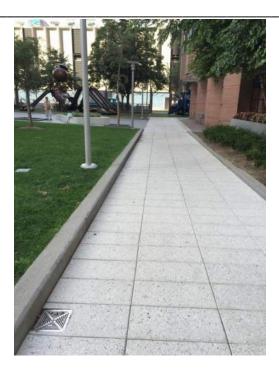


Photo 1: View of walkway at the Site.

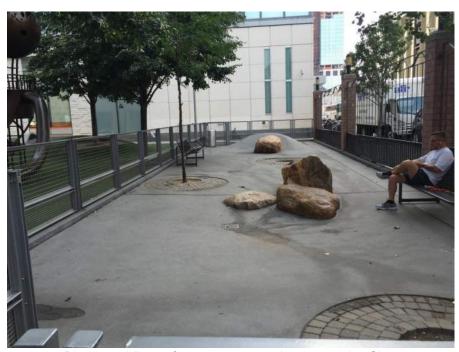


Photo 2: View of pet area ground cover at the Site.



Photo 3: View of landscaped area at the Site.



Photo 4: View of ground cover at play area.



Photo 5: Surface cover in Site lobby.



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



Photo 7: Surface cover in Site mechanical room



Photo 8: Surface cover in Site garbage room.



Photo 9: Surface cover in Site fire pump room.



Photo 10: Surface cover in Site gas meter room.



Photo 11: Surface cover in Site bicycle storage room.



Photo 12: Surface cover in oil pump room



Photo 13: Surface cover beneath Site ASTs.



Photo 14: Site bowling alley.

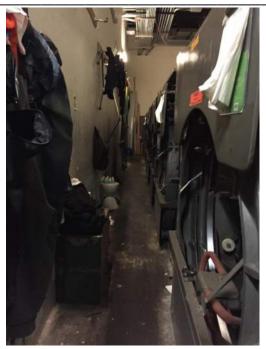


Photo 15: Site bowling alley pin set room.

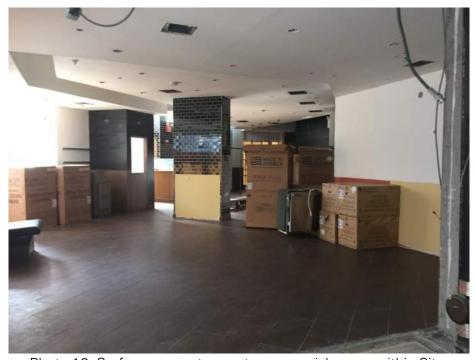


Photo 16: Surface cover at vacant commercial space within Site.



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



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



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



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



Photo 21: Fill port on 41st Street sidewalk.

## **Attachment C**

Annual Groundwater Monitoring Report - 2014



November 7, 2014

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

RE: **Annual Groundwater Monitoring Report - 2014** River Place I & II West 42<sup>nd</sup> 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 12<sup>th</sup> Avenues in New York, New York (the "Site"). A Site Location Map is attached as Figure 1. A Final Engineering Report (FER) for the Site was approved by the New York State Department of Environmental Conservation (NYSDEC) and a Certificate of Completion (COC) was issued on June 19, 2007. A Site Management Plan (SMP) dated July 2006 was approved by NYSDEC.

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

### 2014 Annual Groundwater Sampling

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

BCP Site Nos. C231024 and C231012 Langan Project No.: 170040901

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

MW-N2 and MW-S2 were purged until physical and chemical parameters stabilized. Approximately 8 and 14 gallons were purged from monitoring wells MW-N2 and MW-S2, respectively. After purging, samples MW-N2\_101414 and MW-S2\_101414 were collected using a Waterra pump and dedicated tubing.

The groundwater samples, MW-N2\_101414 and MW-S2\_101414 were collected into laboratory-prepared containers, tightly sealed, uniquely labeled, and then stored on ice for transport to Alpha Analytical (Alpha) in Westborough, Massachusetts, under standard chain-of-custody procedures. The groundwater samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260, semivolatile organic compounds (SVOCs) by EPA Method 8270, Target Analyte List (TAL) metals by EPA SW 6000/7000, cyanide (total) by EPA SW 9012, and cyanide (available) by EPA 9014.

### **Findings**

#### Observations

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

#### Groundwater Analytical Results

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



BCP Site Nos. C231024 and C231012 Langan Project No.: 170040901

MW-N2	
<ul> <li>VOCs</li> <li>1,2,4-trimethylbenzene</li> <li>benzene</li> <li>ethylbenzene</li> <li>naphthalene</li> </ul>	<ul><li>p/m-xylene</li><li>o-xylene</li><li>toluene</li></ul>
<u>SVOCs</u>	
<ul> <li>acenaphthene</li> <li>benzo(a)anthracene</li> <li>benzo(b)fluoranthene</li> <li>benzo(k)fluoranthene</li> <li>benzo(a)pyrene</li> <li>biphenyl</li> </ul>	<ul> <li>chrysene</li> <li>ideno(1,2,3-cd)pyrene</li> <li>naphthalene</li> <li>phenanthrene</li> <li>phenol</li> </ul>
MW-N2	
Inorganics	
<ul><li>cyanide</li><li>iron</li><li>magnesium</li></ul>	<ul><li>manganese</li><li>sodium</li></ul>

M	W-S2		
VO	<u>Cs</u>		
•	1,2,4-trimethylbenzene	•	naphthalene
•	benzene	•	n-propylbenzene
•	ethylbenzene	•	o-xylene
•	isopropylbenzene		
SV	<u>0Cs</u>		
•	acenaphthene	•	benzo(k)fluoranthene
•	benzo(a)anthracene	•	chrysene
•	benzo(a)pyrene	•	indeno(1,2,3-cd)pyrene
•	benzo(b)fluoranthene	•	naphthalene
M	W-S2		
lno	<u>rganics</u>		
•	cyanide	•	manganese
•	iron	•	mercury
•	lead	•	sodium
•	magnesium		

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

Please contact us if you have any questions.

Sincerely,

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

Jason Hayes, P.E.

Senior Associate/Vice President

#### Enclosure(s):

Figure 1 Site Location Map Figure 2 Well Location Map

Table 1 VOCs, SVOCs, Total Metals and Cyanide Detections in Groundwater Samples

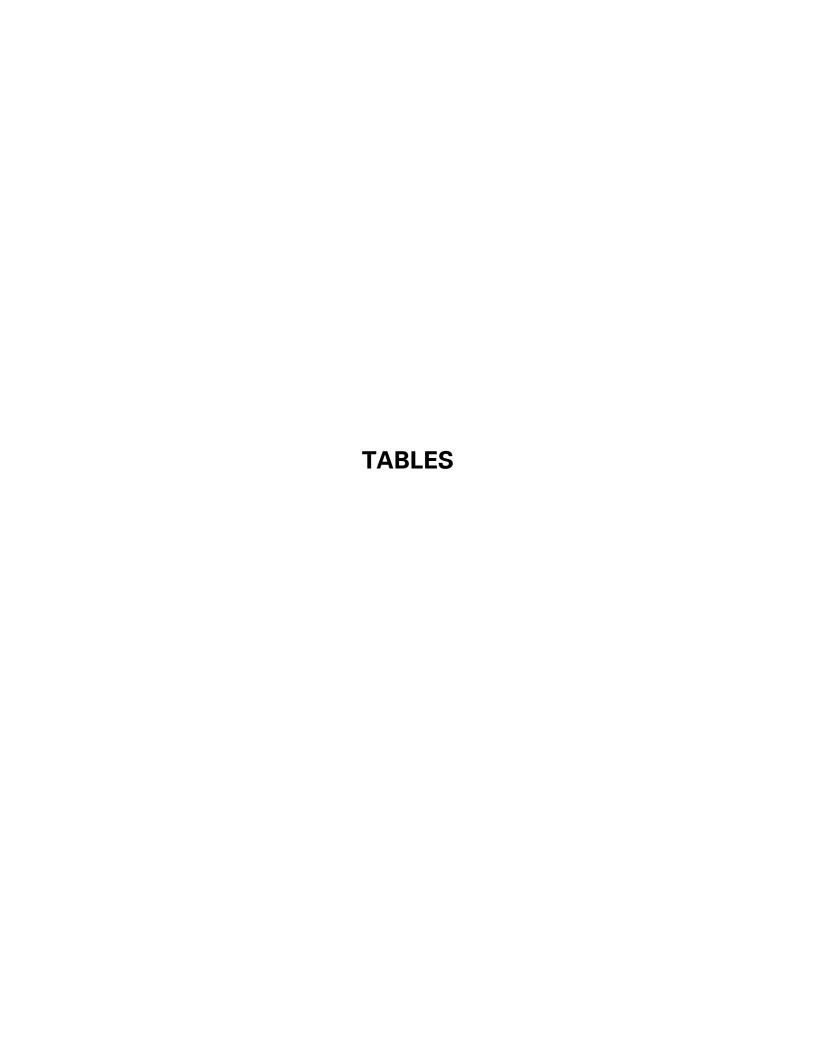
Attachment A Groundwater Sampling Forms

Attachment B Laboratory Analytical Reports, Chain-of-Custody and Certifications

cc:

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





#### 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												
								2010	#II		0044		0040	0014
		1st Quarter	1st Quarter	009 2nd Quarter	3rd Quarter	4th Quarter <sup>7</sup>	1st Quarter	2010 2nd Quarter	3rd Quarter	4th Quarter	2011 YEAR 1	2012 YEAR 2	2013 YEAR 3	2014 YEAR 4
LOCATION		MW-N-3-16-09	DUP-3-16-09	MW-N-6-17-09	MW-N-9/18/09	MW-N2-1-7-2010	MW-N2-3-01-10	MW-N2-6-10-10	MW-N2-9-8-10	MW-N2-12-15-10	MW-N2-10-17-11	MW-N2-101712	MW-N2-100813	MW-N2 101414
SAMPLING DATE	NYSDEC TOGS 1.1.1 AWQS	3/16/2009	3/16/2009	6/17/2009	9/18/2009	1/7/2010	3/1/2010	6/10/2010	9/8/2010	12/15/2010	10/17/2011	10/17/2012	10/8/2013	10/14/2014
LAB SAMPLE ID	MIODEO 1000 IIIII AMQO	L0903143-01	L0903143-03	L0908040-01	L0913185-01	L1000282-01	L1003006-01	L1008735-02	L1013903-01	L1020042-01	L1116955-02	L1218727-02	L1320135-02	L1424443-01
VOCs (µg/L)	•													
1,2,4-Trimethylbenzene	5	1200 U	1200 U	1200 U	1200 U	1200 U	<i>250</i> U	500 U	<i>620</i> U	<i>620</i> U	<b>270</b> J	<b>240</b> J	<b>80</b> J	<b>130</b> J
1,3,5-Trimethylbenzene	5	1200 U	1200 U	1200 U	1200 U	1200 U	250 U	500 U	620 U	620 U	96 J	620 U	250 U	250 U
Benzene	1	19000	19000	17000	15000	2900	610	1100	2100	2400	2400	1600	1100	1400
Ethylbenzene	5	1900	1900	1900	1800	1400	170	410	810	980	810	<b>580</b> J	250	300
Isopropylbenzene	5	250 U	250 U	250 U	250 U	250 U	<i>50</i> U	100 U	120 U	120 U	100 U	620 U	<i>250</i> U	250 U
Methylene chloride	5	2500 U	2500 U	2500 U	2500 U	2500 U	500 U	1000 U	1200 U	1200 U	1000 U	620 U	250 U	250 U
Naphthalene	10	15000	15000	18000	19000	22000	4200	<b>5400</b>	12000	15000	10000	9200	3600	3900
n-Butylbenzene	10		250 U	250 U	250 U		50 U				1000 U	620 U		250 U
	5			250 U		250 U	50 U			120 U 120 U	100 U		250 U 250 U	
n-Propylbenzene	5	230 0	200			250 U		700	720			620 U		250 U
o-Xylene	5	1400	1300	1400	1200	1000	180	330	590	760	630	<b>470</b> J	<b>230</b> J	280
p/m-Xylene	5	3200	3100	3100	2900	2200	330	600	1100	1400	1200	760	280	370
p-lsopropyltoluene	5	<i>250</i> U	<i>250</i> U	<i>250</i> U	<i>250</i> U	<i>250</i> U	<i>50</i> U	100 U	120 U	120 U	100 U	<i>620</i> U	<i>250</i> U	<i>250</i> U
Styrene	5	<i>500</i> U	<i>500</i> U	<i>500</i> U	<i>500</i> U	<i>500</i> U	100 U	<i>200</i> U	<i>250</i> U	<i>250</i> U	<i>200</i> U	<i>620</i> U	<i>250</i> U	<i>250</i> U
Toluene	5	4200	4000	4400	4100	740	<i>75</i> U	<i>150</i> U	290	420	410	<b>240</b> J	<b>90</b> J	<b>120</b> J
SVOCs (µg/L)														
2,4-Dimethylphenol	50	1800	1800	830	1200	270	<i>500</i> U	29	160	10 U	230	150	89	25
Acenaphthene	20	120	160	95	99	61	65	93	97	170	140	190	96	110
Benzo(a)anthracene	0.002	8.8	<i>39</i> U	8.2 U	<i>9.6</i> U	40 U	10 U	9.2	<i>80</i> U	100 U	<i>80</i> U	<i>50</i> U	1.5	10
Benzo(a)pyrene	0	7.2	<i>39</i> U	<i>8.2</i> U	9.6 U	40 U	10 U	8.9	<i>80</i> U	100 U	<i>80</i> U	<i>50</i> U	1.2	7.8
Benzo(b)fluoranthene	0.002	8.4	<i>39</i> U	8.2 U	9.6 U	40 U	10 U	9.2	<i>80</i> U	100 U	<i>80</i> U	<i>50</i> U	1.2	12
Benzo(k)fluoranthene	0.002	3.9 U	39 U	8.2 U	9.6 U	40 U	10 U	4 U	80 U	100 U	<i>80</i> U	<i>50</i> U	<b>0.8</b> J	4.2
Biphenyl	5.552	50	56	26 U	36	72	250 U	30	34	52	46	47	28	33
Bis(2-Ethylhexyl)phthalate	5	24 U	24 U	26 U	46	25 U	250 U	5 U	5 U	52	2 11	2 11	15 U	15 U
Chrysene	0.002	4.1	39 U	8.2 U	9.6 U	40 U	10 U	7.2	80 U	100 U	80 U	50 U	10	7.9
1 · · · · · · · · · · · · · · · · · · ·	50	56	80	59 59	<i>9.0</i> 0	40 U	39	60	80 U	100 U	<b>58</b> J	67	29	41
Fluorene	0.002	3.9 U	39 U	8.2 U	9.6 U	40 U	10 U	4 []	80 U	100 U	80 U	50 U	<b>0.64</b> J	
Indeno(1,2,3-cd)Pyrene	l l											8400		6.5
Naphthalene	10	12000	14000	8900	9400	2200	2700	4200	6900	9100	6800		2800	3000
Phenanthrene	50	100	150	53	62	40	52	84	<i>80</i> U	100 U	97	90	33	75
Phenol	1	120	110	61	87	<i>35</i> U	<i>350</i> U	17	27	16	<i>5</i> U	5 U	<i>25</i> U	<b>15</b> J
Total Metals														
Arsenic, Total	25	15	17	15	15	11	6	5	11	14	128	7.6	6.78	4.5
Iron, Total	300	5300	2700	1900	1200	3500	4000	4800	2600	12000	3300	1270	1780	2870
Lead, Total	25	15	10 U	10 U	10 U	10 U	10 U	10 U	10 U	67	10 U	2.4 J	1.79	2.3
Magnesium, Total	35000	70000	72000	70000	59000	83000	46000	46000	51000	86000	64000	42000	57700	63400
Manganese, Total	300	1570	1430	1570	1340	746	603	632	528	816	582	542.8	337.5	470.6
Mercury, Total	0.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.3	0.2 U	0.2 U	0.2 U	0.2 U
Sodium, Total	20000	300000	320000	270000	250000	240000	110000	160000	200000	240000	210000	127000	175000	172000
General Chemistry	20000													
Cvanide. Total	200	1100	1090	789	799	890	1780	1500	1060	1680	612	126	1210	1000

- Notes:

  1. Groundwater samples were compared to New York State Department of Environmental Conservation (NYSDEC) Technical and Operations Guidance Series (TOGS 1.1.1) Ambient Water Quality Standards (AWQS).

  2. Only compounds with exceedances are shown in the table.

  3. NYSDEC TOGS 1.1.1 AWQS exceedances are highlighted and bolded.

  4. Reporting Limits (RL) above NYSDEC TOGS standards are italicized.

  5. µy/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 <sup>6</sup>										
		2	009			2010			2011	2012	2013	2014
		1st Quarter	2nd Quarter	4th Quarter7	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	YEAR 1	YEAR 2	YEAR 3	YEAR 4
LOCATION		MW-S-3-16-09	MW-S-6-17-09	MW-S2-1-7-2010	MW-S2-3-01-10	MW-S2-6-10-10	MW-S2-9-8-10	MW-S2-12-15-10	MW-S2-10-17-11	MW-S2-101712	MW-S2-100813	MW-S2_101414
SAMPLING DATE	NYSDEC TOGS 1.1.1 AWQS	3/16/2009	6/17/2009	1/7/2010 L1000282-02	3/1/2010	6/10/2010	9/8/2010 L1013903-02	12/15/2010	10/17/2011 L1116955-01	10/17/2012	10/8/2013	10/14/2014 L1424443-02
LAB SAMPLE ID		L0903143-02	L0908040-02	L1000282-02	L1003006-02	L1008735-01	L1013903-02	L1020042-02	L1110955-01	L1218727-01	L1320135-01	L1424443-02
VOCs (µg/L)		70	05 11	222	400	400	450	000	45	70	00	7.0
1,2,4-Trimethylbenzene	5	76	25 U	280	130	180	150	200	45	79	26	7.2
1,3,5-Trimethylbenzene	5	<i>62</i> U	25 U		120 U	120 U	120 U	120 U	12 U	3 J	10 U	2.5 U
Benzene	1_	140	170	200	75	120	110	120	23	94	99	44
Ethylbenzene	5	160	20	710	330	590	460	560	100	260	160	60
Isopropylbenzene	5	35	5.4	64	30	61	44	63	13	55	46	19
Methylene chloride	5	120 U	<i>50</i> U	420	<i>250</i> U	<i>250</i> U	<i>250</i> U	<i>250</i> U	<i>25</i> U	6.2 U	10 U	2.5 U
Naphthalene	10	610	350	4900	1800	1700	1900	1100	170	150	62	36
n-Butylbenzene	5	<i>12</i> U	5 U	6.2	<i>25</i> U	<i>25</i> U	<i>25</i> U	<i>25</i> U	2.5 U	6.2 U	10 U	0.77 J
n-Propylbenzene	5	19	5 U	42	25 U	37	30	37	8.5	34	22	9.3
o-Xylene	5	43	16	320	110	150	70	<i>50</i> U	24	20	12	12
p/m-Xylene	5	50	21	410	150	150	82	<i>50</i> U	17	9.2	10 U	4.8
p-lsopropyltoluene	5	12 U	5 U	11	<i>25</i> U	25 U	<i>25</i> U	<i>25</i> U	2.5 U	6.2 U	10 U	2.5 U
Styrene	5	<i>25</i> U	10 U	40	<i>50</i> U	<i>50</i> U	<i>50</i> U	<i>50</i> U	5 U	6.2 U	10 U	2.5 U
Toluene	5	19 U	29	180	46	<i>38</i> U	<i>38</i> U	<i>38</i> U	8.5	4.2 J	10 U	3
SVOCs (ug/L)	•					-						•
2,4-Dimethylphenol	50	10 U	10 U	10 U	500 U	10 U	10 U	10 U	5 U	5 U	25 U	25 U
Acenaphthene	20	14	0.2 U	200 U	63	59	41	63	15	49	39	34
Benzo(a)anthracene	0.002	<i>0.2</i> U	0.2 U	200 U	10 U	4.4	10 U	18	4.2	6.3	6.5	3.4
Benzo(a)pyrene	0	0.2 U	0.2 U	200 U	15	4.8	10 U	17	4	5.4	6.4	2.6
Benzo(b)fluoranthene	0.002	0.2 U	0.2 U	200 U	14	3.4	10 U	17	2.9	3	4.7	3.9
Benzo(k)fluoranthene	0.002	0.2 U	0.2 U	200 U	10 U	2 U	10 U	10 U	1.5	3.2	3.3	1.2
Biphenyl	5	8.5	5.1 U	49	250 U	46	27	55	6.9	26	13	10 U
Bis(2-Ethylhexyl)phthalate	5	5 U	5.1 U	5 U	<i>250</i> U	5 U	5 U	5 U	3 U	3 U	15 U	15 U
Chrysene	0.002	0.2 U	0.2 U	200 U	10 U	4	10 U	10 U	3.2	5.3	6	3.3
Fluorene	50	8.9	0.2 U	200 U	61	53	36	42	13	33	16	6.1
Indeno(1,2,3-cd)Pyrene	0.002	0.2 U	0.2 U	200 U	10 U	2 U	10 U	15	1.8	3.3	3.1	2.1
Naphthalene	10	300	0.62	11000	1400	1600	990	400	9.3	90	51	19
Phenanthrene	50	-	0.02 U	200 U	120	74	52	63	16	32	11	25
Phenol	1	7 U	7.2 U	7.7	350 U	7 U	7 U	7 U	5 U	5 U	25 U	25 U
Total Metals	ı	/ 0	7.2	1.1	330 0	/ 0	/ 0	/ 0	3 0	5 0	20 0	20 0
	25	20	6	17	13	10	18	19	13	10.5	9.04	18.2
Arsenic, Total	300	21000	6 <b>9200</b>	<b>3200</b>	11000	<b>5000</b>	9800	12000	9900	12100	5830	33400
Iron, Total												
Lead, Total	25	158	45	17 <b>120000</b>	117	29	86	166	42	108.7	70.29	366.9
Magnesium, Total	35000	71000	48000		87000	85000	93000	84000	68000	43800	53800	95500
Manganese, Total	300	598	403	327	636	430	492	558	537	574.9	279.6	1074
Mercury, Total	0.7	0.5	0.2 U	0.3	0.6	0.2	0.5	0.9	0.2 U	0.8	0.2 U	1.58
Sodium, Total	20000	96000	100000	98000	89000	68000	76000	67000	42000	32600	49400	71700
General Chemistry												
Cyanide, Total	200	1920	1920	1090	973	1110	1540	1410	798	152	1030	1380

Notes:
1. Groundwater samples were compared to New York State Department of Environmental
Conservation (NYSDEC) Technical and Operations Guidance Series (TOGS 1.1.1) Ambient Water Quality Standards (AWQS).

- 2. Only compounds with exceedances are shown in the table.
  3. NYSDEC TOGS 1.1.1 AWQS exceedances are highlighted and bolded.
  4. Reporting Limits (RL) above NYSDEC TOGS standards are italicized.

- 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-N and MW-S were installed in the approximate least incomplete MW-N and MW-S were destroyed.
- wells MW-N2 and MW-S2 were installed in the approximate locations of MW-N2 and MW-S0 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										
			20					2010			2011	2012
		1st Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	YEAR 1	YEAR 2
LOCATION SAMPLING DATE	NIVERTO TOOK 4.4.4 AWOR	FB-3-16-09 3/16/2009	TRIP BLANK 3/16/2009	TRIP BLANK 6/17/2009	TRIP BLANK 9/18/2009	TRIP BLANK-1-7-2010 1/7/2010	TB-3-01-10 3/1/2010	TB-6-10-10 6/10/2010	TB-9-8-10 9/8/2010	TB-12-15-10 12/15/2010	TRIP BLANK-101711 10/17/2011	TRIP BLANK 10/17/2012
LAB SAMPLE ID	NYSDEC TOGS 1.1.1 AWQS	L0903143-04	L0903143-05	L0908040-03	L0913185-02	L1000282-03	L1003006-03	L1008735-03	L1013903-03	L1020042-03	L1116955-03	L1218727-03
		L0303 143-04	L0303143-05	LU3U0U4U-U3	LU313103-02	L1000282-03	L1003000-03	L1000/35-03	L1013903-03	L 1020042-03	L1110303-03	L1210/2/-03
VOCs (μg/L) 1,2,4-Trimethylbenzene	-	2.5	2.5 11	2.5	1 25 11	2.5	2.5	2	2.5 11.1	2.5	0.5 11	2.5
1,3,5-Trimethylbenzene	5	2.5 U 2.5 U	2.5 U	2.5 U 2.5 U	2.5 U 2.5 U	2.5 U	2.5 U 2.5 U	2.5 U 2.5 U	2.5 U 2.5 U	2.5 U 2.5 U	2.5 U 2.5 U	2.5 U
	5	2.5 U 0.5 U	2.5 U 0.5 U	2.5 U 0.5 U	2.5 U 0.5 U	2.5 U 0.5 U	2.5 U 0.5 U	2.5 U 0.5 U	2.5 U 0.5 U	2.5 U 0.5 U	2.5 U 0.5 U	2.0
Benzene	<u> </u>											0.0
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		0.5 U 0.5 U	0.5 U 0.5 U	2.5 U 2.5 U
Isopropylbenzene	5								*.*			
Methylene chloride	5	5 U 2.5 U		5 U 2.5 U		-	5 U 2.5 U	5 U 2.5 U	5 U 2.5 U	5 U 2.5 U	5 U	
Naphthalene	10										2.5 U	
n-Butylbenzene	5	0.5 U 0.5 U		0.5 U 0.5 U	0.0	***	0.5 U			0.5 U	0.5 U	
n-Propylbenzene	5	0.5 U	0.0		0.5 U	0.5 U	0.0		0.0	0.0	0.5 U	
o-Xylene	5	1 0	1 U	1 U	1 0	1 U	1 U	1 U	1 U I	1 U	1 U	2.5 U
p/m-Xylene	5	1 0			1 0	1 U		1 U		1 U	1 U	2.5 U
p-Isopropyltoluene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U
Styrene	5 -	1 0	1 0	1 U	1 0	1 U	1 0	1 U	1 0	1 U	1 0	2.5 U
Toluene	5	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	2.5 U
SVOCs (μg/L)					1						1	
2,4-Dimethylphenol	50	9.6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	20	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	0.002	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	0	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	0.002	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	0.002	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biphenyl	5	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-Ethylhexyl)phthalate	5	4.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	0.002	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	50	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)Pyrene	0.002	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	10	0.34	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	50	0.19 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	1	<i>6.7</i> U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals												
Arsenic, Total	25	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron, Total	300	50 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead, Total	25	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium, Total	35000	100 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Total	300	10 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury, Total	0.7	0.2 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium, Total	20000	2000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry		· · · · · · · · · · · · · · · · · · ·			•							
Cyanide, Total	200	5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
i a l'acceptant de la company		Ü			1.07		, .		, .			

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

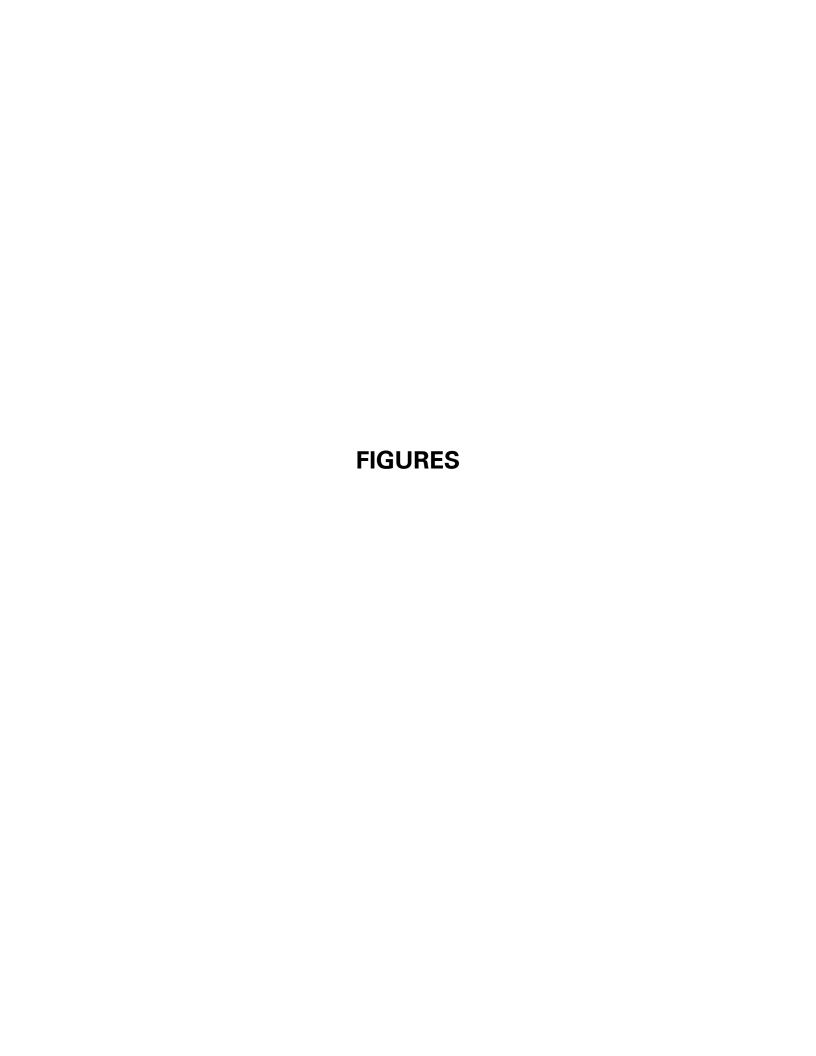
Quality Standards (AWQS).

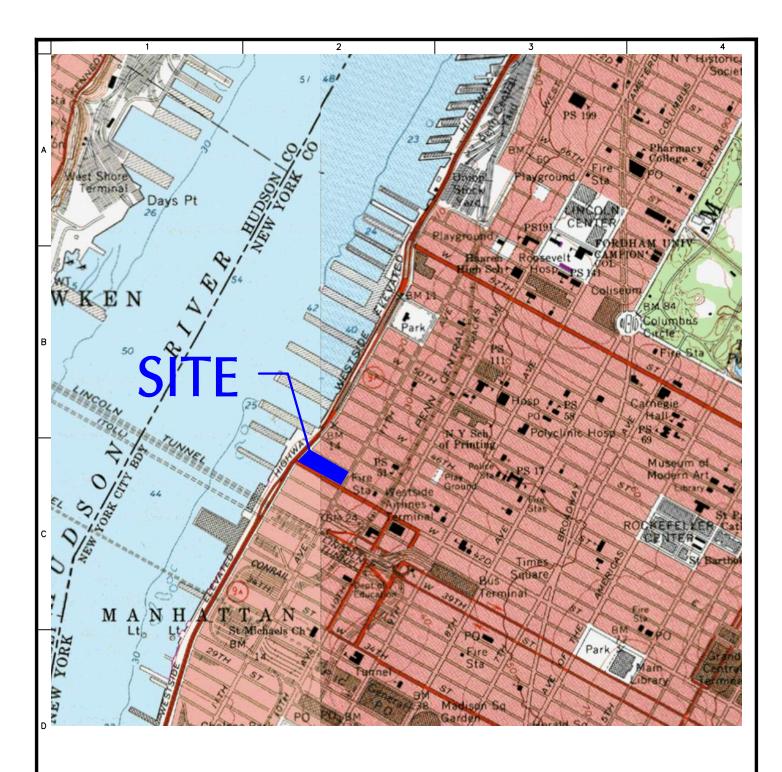
- 2. Only compounds with exceedances are shown in the table.
  3. NYSDEC TOGS 1.1.1 AWQS exceedances are highlighted and bolded.
  4. Reporting Limits (RL) above NYSDEC TOGS standards are italicized.

- κeporting Limits (κ.) above NYSDEC 106:
   μg/L = micrograms per liter
   VOCs = Volatile Organic Compounds
   SVOCs = Semivolatile Organic Compounds
   NA = Not Analyzed

- Nonitoring well MW-S was destroyed during construction activities. No data is available for the 3rd Quarter 2009.
   Monitoring wells MW-N and MW-S were destroyed due to construction activities. Monitoring wells MW-N2 and MW-S2 were installed in the approximate locations of MW-N and MW-S once construction was complete. New monitoring well locations are shown on Figure 2.

- Qualifiers:
  U = 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.





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.

NEW YORK

Figure Title

## 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

NEW YORK

**RIVER PLACE I AND II** 

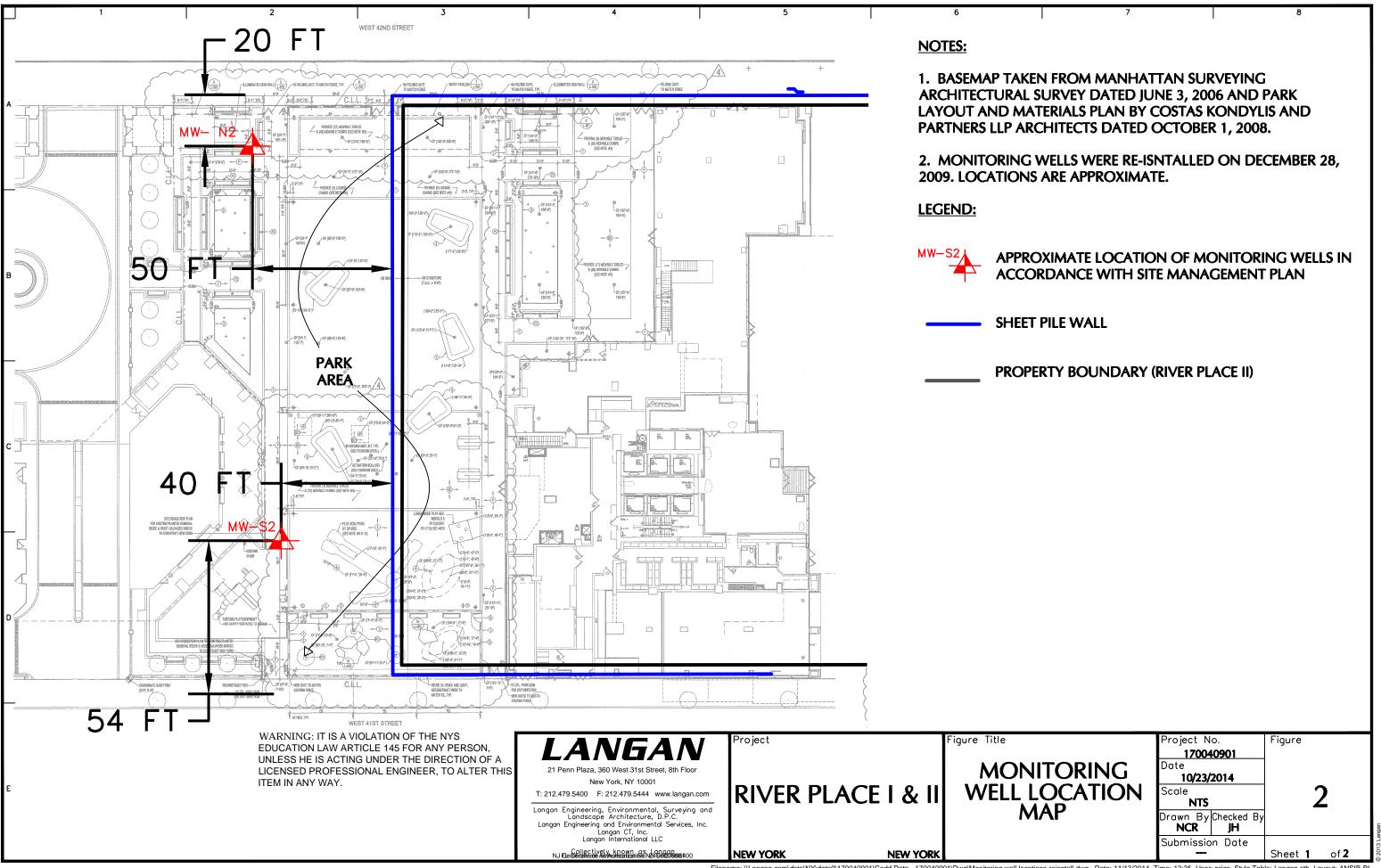
# SITE LOCATION MAP

1700	40901	Figure
Date		
10/22/	2014	_
Scale NT\$		1
Drawn By NCR	Checked By JH	
Submission	Date	

Sheet 1 of 2

November 2014

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# ATTACHMENT A GROUNDWATER SAMPLING FORMS

## **GROUND WATER SAMPLE FIELD INFORMATION FORM**

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

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

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

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

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

Notes/Remarks

8:00-8:35 pump/generator troubleshooting



## **GROUND WATER SAMPLE FIELD INFORMATION FORM**

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

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

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

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

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

#### Notes/Remarks

- \* Horiba cell cleaned (turbidity reading was over 1000); turbidity reading didn't change after the cleaning
- \*\* After over two hours of purging the monitoring well, the turbidity did not drop below 890 NTUs.
- \*\*\* Sheen was observed on the purged water in the bucket



Langan Engineering and Environmental Services

# ATTACHMENT B LABORATORY ANALYTICAL REPORTS, CHAIN-OFCUSTODY AND CERTIFICATIONS



#### ANALYTICAL REPORT

Lab Number: L1424443

Client: Langan Engineering & Environmental

21 Penn Plaza

360 W. 31st Street, 8th Floor

New York, NY 10001-2727

ATTN: Nicole Rice
Phone: (212) 479-5400

Project Name: RIVER PLACE I + II

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

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

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

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



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

#### **Case Narrative**

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

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

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

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

#### **HOLD POLICY**

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

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



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

### **Case Narrative (continued)**

### Report Submission

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

### Sample Receipt

Sample "TB01\_101414" was not received.

### Semivolatile Organics

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

### Semivolatile Organics by SIM

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

#### Metals

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

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

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

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



L1424443

**Project Name:** RIVER PLACE I + II

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

Lab Number:

**Case Narrative (continued)** 

for the laboratory duplicate.

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

Authorized Signature:

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

600 Skulow Kelly Stenstrom

## **ORGANICS**



## **VOLATILES**



L1424443

10/23/14

**Project Name:** RIVER PLACE I + II

**Project Number:** 170040901

**SAMPLE RESULTS** 

Date Collected: 10/14/14 09:55

Lab ID: L1424443-01 D Client ID:

MW-N2\_101414

Sample Location: 650 WEST 42ND STREET

Matrix: Water Analytical Method: 1,8260C Analytical Date: 10/19/14 18:32

Analyst: PD Date Received: 10/15/14 Field Prep: Not Specified

Lab Number:

Report Date:

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



10/14/14 09:55

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

**SAMPLE RESULTS** 

Lab ID: L1424443-01 D Date Collected:

Client ID: MW-N2\_101414 Date Received: 10/15/14

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

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



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

**SAMPLE RESULTS** 

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

Client ID: MW-N2\_101414 Date Received: 10/15/14

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

Parameter Result Qualifier Units RL MDL Dilution Factor

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

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



**Project Name:** RIVER PLACE I + II

**Project Number:** 170040901

Lab Number: L1424443

Report Date: 10/23/14

**SAMPLE RESULTS** 

Lab ID: L1424443-02 Client ID: MW-S2\_101414

Sample Location: 650 WEST 42ND STREET

Matrix: Water Analytical Method: 1,8260C Analytical Date: 10/19/14 19:06

Analyst: PD Date Collected:

10/14/14 12:55

Date Received:

10/15/14

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - West	borough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	44		ug/l	0.50	0.16	1
Toluene	3.0		ug/l	2.5	0.70	1
Ethylbenzene	60		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.19	J	ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1



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

**SAMPLE RESULTS** 

Lab ID: Date Collected: 10/14/14 12:55

Client ID: MW-S2\_101414 Date Received: 10/15/14 Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified

Sample Location. 030 WLOT	42ND STREET			i icia i i	-p.	Not Specified
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - We	estborough Lab					
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	4.8		ug/l	2.5	0.70	1
o-Xylene	12		ug/l	2.5	0.70	1
Xylenes, Total	17		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	1.1	J	ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	0.77	J	ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	19		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	36		ug/l	2.5	0.70	1
n-Propylbenzene	9.3		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1



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

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

**SAMPLE RESULTS** 

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

Client ID: MW-S2\_101414 Date Received: 10/15/14 Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified

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

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



**Project Name:** RIVER PLACE I + II

**Project Number:** 170040901

**SAMPLE RESULTS** 

Lab Number: L1424443

Report Date: 10/23/14

Lab ID: L1424443-03 D

Client ID: WW01\_101414

Sample Location: 650 WEST 42ND STREET

Matrix: Water Analytical Method: 1,8260C Analytical Date: 10/19/14 19:40

Analyst: PD Date Collected: 10/14/14 13:10

Date Received: 10/15/14

Field Prep: Not Specified

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



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

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

**SAMPLE RESULTS** 

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

Client ID: WW01 101414 Date Received: 10/15/14 650 WEST 42ND STREET

Field Prep: Not Specified Sample Location: **Parameter** Qualifier Units RL MDL **Dilution Factor** Volatile Organics by GC/MS - Westborough Lab 1,3-Dichlorobenzene ND 25 7.0 10 ug/l 1,4-Dichlorobenzene ND ug/l 25 7.0 10 25 Methyl tert butyl ether ND ug/l 7.0 10 p/m-Xylene 51 25 7.0 10 ug/l o-Xylene 46 ug/l 25 7.0 10 Xylenes, Total 97 25 7.0 10 ug/l cis-1,2-Dichloroethene ND 25 7.0 10 ug/l 1,2-Dichloroethene, Total ND ug/l 25 7.0 10 Dibromomethane ND 50 10. 10 ug/l 1,2,3-Trichloropropane ND ug/l 25 7.0 10 Acrylonitrile ND ug/l 50 15. 10 25 Styrene ND 7.0 10 ug/l Dichlorodifluoromethane ND 50 10. 10 ug/l Acetone ND ug/l 50 15. 10 Carbon disulfide ND 50 10. 10 ug/l 2-Butanone ND 50 19. 10 ug/l Vinyl acetate ND 50 ug/l 10. 10 4-Methyl-2-pentanone ND 50 10. 10 ug/l 2-Hexanone ND 50 10. 10 ug/l 25 7.0 Bromochloromethane ND 10 ug/l ND 25 7.0 10 2,2-Dichloropropane ug/l 1,2-Dibromoethane ND ug/l 20 6.5 10 ND 25 7.0 10 1,3-Dichloropropane ug/l 1,1,1,2-Tetrachloroethane ND ug/l 25 7.0 10 Bromobenzene ND ug/l 25 7.0 10 n-Butylbenzene ND ug/l 25 7.0 10 sec-Butylbenzene ND ug/l 25 7.0 10 tert-Butylbenzene ND ug/l 25 7.0 10 ND 25 o-Chlorotoluene ug/l 7.0 10 p-Chlorotoluene ND ug/l 25 7.0 10 1,2-Dibromo-3-chloropropane ND ug/l 25 7.0 10 ND 25 7.0 10 Hexachlorobutadiene ug/l Isopropylbenzene 12 J ug/l 25 7.0 10 ND ug/l 25 p-Isopropyltoluene 7.0 10 Naphthalene 570 25 7.0 10 ug/l n-Propylbenzene ND 25 7.0 10 ug/l 1,2,3-Trichlorobenzene ND 25 7.0 10 ug/l ND 25 7.0

ug/l

ug/l

25

7.0

ND



10

10

1,2,4-Trichlorobenzene

1,3,5-Trimethylbenzene

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

**SAMPLE RESULTS** 

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

Client ID: WW01\_101414 Date Received: 10/15/14

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

Parameter Result Qualifier Units RI MDI Dilution Factor

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

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

**Report Date:** 10/23/14

## Method Blank Analysis Batch Quality Control

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

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

**Report Date:** 10/23/14

## Method Blank Analysis Batch Quality Control

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

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

**Report Date:** 10/23/14

## Method Blank Analysis Batch Quality Control

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

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



L1424443

Project Name: RIVER PLACE I + II Lab Number:

> Method Blank Analysis Batch Quality Control

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

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

		Acceptance
%Recovery	Qualifier	Criteria
105		70-130
97		70-130
99		70-130
106		70-130
	105 97 99	%Recovery Qualifier  105 97 99



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

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



**Project Name:** RIVER PLACE I + II

**Project Number:** 

170040901

Lab Number:

L1424443

Report Date:

10/23/14

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

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



## **SEMIVOLATILES**



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

SAMPLE RESULTS

D2

Client ID: MW-N2\_101414

Sample Location: 650 WEST 42ND STREET

L1424443-01

Matrix: Water

Lab ID:

Analytical Method: 1,8270D-SIM Analytical Date: 10/22/14 10:38

Analyst: MW

Date Collected: 10/14/14 09:55

Date Received: 10/15/14
Field Prep: Not Specified
Extraction Method: EPA 3510C

Extraction Date: 10/18/14 11:41

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



10/15/14

**Dilution Factor** 

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

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

**SAMPLE RESULTS** 

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

Date Received: MW-N2\_101414 Client ID:

Result

Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified Extraction Method: EPA 3510C Matrix: Water

Analytical Method: 1,8270D **Extraction Date:** 10/18/14 11:39 Analytical Date:

Qualifier

Units

RL

MDL

Analyst: PS

**Parameter** 

10/22/14 21:52

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



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

**SAMPLE RESULTS** 

Lab ID: L1424443-01 D

Client ID: MW-N2\_101414

Sample Location: 650 WEST 42ND STREET

Date Collected:

10/14/14 09:55

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

					-	•
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - 1	Westborough Lab					
Acetophenone	10	J	ug/l	25	2.1	5
2,4,6-Trichlorophenol	ND		ug/l	25	3.9	5
P-Chloro-M-Cresol	ND		ug/l	10	2.7	5
2-Chlorophenol	ND		ug/l	10	2.9	5
2,4-Dichlorophenol	ND		ug/l	25	2.8	5
2,4-Dimethylphenol	25		ug/l	25	2.9	5
2-Nitrophenol	ND		ug/l	50	5.2	5
4-Nitrophenol	ND		ug/l	50	5.4	5
2,4-Dinitrophenol	ND		ug/l	100	7.0	5
4,6-Dinitro-o-cresol	ND		ug/l	50	6.8	5
Phenol	15	J	ug/l	25	1.4	5
2-Methylphenol	34		ug/l	25	3.5	5
3-Methylphenol/4-Methylphenol	51		ug/l	25	3.6	5
2,4,5-Trichlorophenol	ND		ug/l	25	3.7	5
Benzoic Acid	ND		ug/l	250	5.0	5
Benzyl Alcohol	ND		ug/l	10	3.4	5
Carbazole	100		ug/l	10	1.9	5

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

10/15/14

Not Specified

10/18/14 11:41

EPA 3510C

Date Received:

Extraction Method:

**Extraction Date:** 

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

**SAMPLE RESULTS** 

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

Client ID: MW-N2\_101414

Sample Location: 650 WEST 42ND STREET Field Prep:

Matrix: Water

Analytical Method: 1,8270D-SIM Analytical Date: 10/22/14 10:06

Analyst: MW

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

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

SAMPLE RESULTS

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

Client ID: MW-N2\_101414 Date Received: 10/15/14 Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified

Parameter Result Qualifier Units RL MDL Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

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



10/15/14

Date Received:

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

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

**SAMPLE RESULTS** 

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

MW-S2\_101414 Client ID:

Sample Location: 650 WEST 42ND STREET

Matrix: Analytical Method: 1,8270D Analytical Date: 10/22/14 22:20

Analyst: PS

Field Prep: Not Specified Extraction Method: EPA 3510C Water 10/18/14 11:39 **Extraction Date:** 

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



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

**SAMPLE RESULTS** 

Lab ID: L1424443-02 D

Client ID: MW-S2\_101414

Sample Location: 650 WEST 42ND STREET

Date Collected:

10/14/14 12:55

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

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

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

10/15/14

Not Specified

10/18/14 11:41

EPA 3510C

Date Received:

Extraction Method:

**Extraction Date:** 

Field Prep:

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

**SAMPLE RESULTS** 

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

Client ID: MW-S2\_101414

Sample Location: 650 WEST 42ND STREET

Matrix: Water

Analytical Method: 1,8270D-SIM Analytical Date: 10/22/14 13:00

Analyst: MW

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

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

SAMPLE RESULTS

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

Client ID: MW-S2\_101414 Date Received: 10/15/14 Sample Location: 650 WEST 42ND STREET Field Prep: Not Specified

Parameter Result Qualifier Units RL MDL Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

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



Extraction Method: EPA 3510C

L1424443

10/23/14

Lab Number:

**Report Date:** 

**Project Name:** RIVER PLACE I + II

**Project Number:** 170040901

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D Α

Analytical Date:	10/21/14 11:51	Extraction Date:	10/18/14 11:39
Analyst:	PS		

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

**Report Date:** 10/23/14

## Method Blank Analysis Batch Quality Control

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

Analyst: PS

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

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



L1424443

10/23/14

Lab Number:

Report Date:

**Project Name:** RIVER PLACE I + II

**Project Number:** 170040901

Method Blank Analysis Batch Quality Control

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

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

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

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

**Report Date:** 10/23/14

Method Blank Analysis Batch Quality Control

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

Analyst: MW

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

Parameter	Result	Qualifier	Units	RL	MDL	
Semivolatile Organics by GC/MS-S	SIM - Westbo	orough Lab	for sample	e(s): 01-02	Batch: WG73	32362-1
Acenaphthene	ND		ug/l	0.20	0.06	
2-Chloronaphthalene	ND		ug/l	0.20	0.07	
Fluoranthene	ND		ug/l	0.20	0.04	
Hexachlorobutadiene	ND		ug/l	0.50	0.07	
Naphthalene	ND		ug/l	0.20	0.06	
Benzo(a)anthracene	ND		ug/l	0.20	0.06	
Benzo(a)pyrene	ND		ug/l	0.20	0.07	
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	
Chrysene	ND		ug/l	0.20	0.05	
Acenaphthylene	ND		ug/l	0.20	0.05	
Anthracene	ND		ug/l	0.20	0.06	
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	
Fluorene	ND		ug/l	0.20	0.06	
Phenanthrene	ND		ug/l	0.20	0.06	
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20	0.08	
Pyrene	ND		ug/l	0.20	0.06	
2-Methylnaphthalene	ND		ug/l	0.20	0.06	
Pentachlorophenol	ND		ug/l	0.80	0.19	
Hexachlorobenzene	ND		ug/l	0.80	0.01	
Hexachloroethane	ND		ug/l	0.80	0.07	

L1424443

**Project Name:** RIVER PLACE I + II

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

Lab Number:

Method Blank Analysis Batch Quality Control

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

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

Parameter	Result	Qualifier	Units	RL	MDL	
Semivolatile Organics by GC/MS-SI	M - Westbo	rough Lab	for sample(s):	01-02	Batch: \	NG732362-1

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westbord	ough Lab Assoc	iated sample(s):	01-02 Batcl	n: WG7323	360-2 WG732360	-3		
Pyrene	86		85		26-127	1		30
Biphenyl	97		92			5		30
4-Chloroaniline	73		52		40-140	34	Q	30
2-Nitroaniline	96		92		52-143	4		30
3-Nitroaniline	63		55		25-145	14		30
4-Nitroaniline	73		76		51-143	4		30
Dibenzofuran	84		82		40-140	2		30
2-Methylnaphthalene	76		73		40-140	4		30
1,2,4,5-Tetrachlorobenzene	84		80		2-134	5		30
Acetophenone	83		82		39-129	1		30
2,4,6-Trichlorophenol	92		92		30-130	0		30
P-Chloro-M-Cresol	89		91		23-97	2		30
2-Chlorophenol	72		73		27-123	1		30
2,4-Dichlorophenol	90		89		30-130	1		30
2,4-Dimethylphenol	24	Q	19	Q	30-130	23		30
2-Nitrophenol	86		80		30-130	7		30
4-Nitrophenol	65		68		10-80	5		30
2,4-Dinitrophenol	92		90		20-130	2		30
4,6-Dinitro-o-cresol	92		90		20-164	2		30
Pentachlorophenol	72		82		9-103	13		30
Phenol	37		37		12-110	0		30



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	RPD Qual Limits	
Semivolatile Organics by GC/MS - We	stborough Lab Associa	ted sample(s	s): 01-02 Batc	h: WG7323	360-2 WG732360-	3		
2-Methylphenol	49		52		30-130	6	30	
3-Methylphenol/4-Methylphenol	59		63		30-130	7	30	
2,4,5-Trichlorophenol	95		94		30-130	1	30	
Benzoic Acid	21		26			21	30	
Benzyl Alcohol	69		66			4	30	
Carbazole	86		85		55-144	1	30	

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

Parameter	LCS %Recovery	LCSD Qual %Recovery	%Recovery Qual Limits	/ RPD	RPD Qual Limits
Semivolatile Organics by GC/MS-SIM -	Westborough Lab As	ssociated sample(s): 01-02	Batch: WG732362-2 W	G732362-3	
Acenaphthene	71	76	37-111	7	40
2-Chloronaphthalene	82	81	40-140	1	40
Fluoranthene	91	91	40-140	0	40
Hexachlorobutadiene	67	67	40-140	0	40
Naphthalene	71	75	40-140	5	40
Benzo(a)anthracene	92	90	40-140	2	40
Benzo(a)pyrene	88	82	40-140	7	40
Benzo(b)fluoranthene	104	96	40-140	8	40
Benzo(k)fluoranthene	94	93	40-140	1	40
Chrysene	84	80	40-140	5	40
Acenaphthylene	68	68	40-140	0	40
Anthracene	77	77	40-140	0	40
Benzo(ghi)perylene	96	93	40-140	3	40
Fluorene	83	85	40-140	2	40
Phenanthrene	75	76	40-140	1	40
Dibenzo(a,h)anthracene	99	100	40-140	1	40
Indeno(1,2,3-cd)Pyrene	101	96	40-140	5	40
Pyrene	89	90	26-127	1	40
2-Methylnaphthalene	81	82	40-140	1	40
Pentachlorophenol	70	76	9-103	8	40
Hexachlorobenzene	74	75	40-140	1	40



**Project Name:** RIVER PLACE I + II

170040901

**Project Number:** 

Lab Number:

L1424443

Report Date:

10/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	RPD _imits
Semivolatile Organics by GC/MS-SIM - Wes	stborough Lab Ass	ociated san	nple(s): 01-02	Batch: WG	9732362-2 WG732	2362-3	
Hexachloroethane	70		73		40-140	4	40

LCS	LCSD	Acceptance
%Recovery	Qual %Recovery	Qual Criteria
39	41	21-120
34	35	10-120
83	84	23-120
88	83	15-120
85	82	10-120
87	87	41-149
	%Recovery  39 34 83 88 85	%Recovery         Qual         %Recovery           39         41           34         35           83         84           88         83           85         82



## **METALS**



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

**SAMPLE RESULTS** 

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

 Client ID:
 MW-N2\_101414
 Date Received:
 10/15/14

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

Matrix: Water

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



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

**SAMPLE RESULTS** 

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

 Client ID:
 MW-S2\_101414
 Date Received:
 10/15/14

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

Matrix: Water

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

**Report Date:** 10/23/14

# Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	
Total Metals - Westbord	ough Lab	for sample(	s): 01-02	Batch:	WG73	1654-1				
Mercury, Total	ND		mg/l	0.00020	0.0000	6 1	10/16/14 11:30	10/20/14 18:05	1,7470A	AK

### **Prep Information**

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	
Total Metals - Westborou	igh Lab	for sample(s	): 01-02	Batch:	WG733	3087-1				
Aluminum, Total	0.010		mg/l	0.010	0.002	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Antimony, Total	ND		mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Arsenic, Total	ND		mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Barium, Total	0.0001	J	mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Beryllium, Total	ND		mg/l	0.0005	0.0002	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Cadmium, Total	ND		mg/l	0.0002	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Calcium, Total	ND		mg/l	0.100	0.032	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Chromium, Total	ND		mg/l	0.0010	0.0003	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Cobalt, Total	ND		mg/l	0.0002	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Copper, Total	ND		mg/l	0.0010	0.0003	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Iron, Total	ND		mg/l	0.050	0.012	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Lead, Total	ND		mg/l	0.0010	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Magnesium, Total	ND		mg/l	0.070	0.022	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Manganese, Total	ND		mg/l	0.0005	0.0003	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Nickel, Total	0.0001	J	mg/l	0.0005	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Potassium, Total	0.035	J	mg/l	0.100	0.019	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Selenium, Total	ND		mg/l	0.005	0.001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Silver, Total	0.0001	J	mg/l	0.0003	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Sodium, Total	ND		mg/l	0.100	0.016	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Thallium, Total	ND		mg/l	0.0002	0.0001	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Vanadium, Total	ND		mg/l	0.0050	0.0006	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ
Zinc, Total	ND		mg/l	0.0100	0.0026	1	10/21/14 16:54	10/22/14 16:07	1,6020A	ВМ



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

Method Blank Analysis Batch Quality Control

**Prep Information** 

Digestion Method: EPA 3005A



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

L1424443

**Project Number:** 170040901

Report Date:

10/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sa	mple(s): 01-02	Batch: WG	3731654-2					
Mercury, Total	106		-		80-120	-		



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

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

**Project Name:** RIVER PLACE I + II

Lab Number: L1424443

**Project Number:** 170040901

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number:

L1424443

Report Date:

10/23/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery Q	Recovery ual Limits	/ RPD Qual	RPD Limits
Total Metals - Westborough La	ab Associated	sample(s):	01-02 QC	Batch ID: WG	731654-4	4 QCS	Sample: L1424301	-01 Client ID:	MS Sample	
Mercury, Total	ND	0.005	0.00414	83		-	-	75-125	-	20



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

arameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Гotal Metals - Westborough L	_ab Associated	sample(s):	01-02 QC	Batch ID: WG7	33087-4	QC S	ample: L1424443-01	Client ID:	MW-N2_1	01414
Aluminum, Total	0.218	2	2.50	114		-	-	75-125	-	20
Antimony, Total	0.0006	0.5	0.5373	107		-	-	75-125	-	20
Arsenic, Total	0.0045	0.12	0.1363	110		-	-	75-125	-	20
Barium, Total	0.2165	2	2.317	105		-	-	75-125	-	20
Beryllium, Total	ND	0.05	0.0567	113		-	-	75-125	-	20
Cadmium, Total	ND	0.051	0.0562	110		-	-	75-125	-	20
Calcium, Total	204.	10	254	500	Q	-	-	75-125	-	20
Chromium, Total	0.0022	0.2	0.2168	107		-	-	75-125	-	20
Cobalt, Total	0.0085	0.5	0.5656	111		-	-	75-125	-	20
Copper, Total	0.0008J	0.25	0.2528	101		-	-	75-125	-	20
Iron, Total	2.87	1	4.72	185	Q	-	-	75-125	-	20
Lead, Total	0.0023	0.51	0.5505	107		-	-	75-125	-	20
Magnesium, Total	63.4	10	85.6	222	Q	-	-	75-125	-	20
Manganese, Total	0.4706	0.5	1.093	124		-	-	75-125	-	20
Nickel, Total	0.0016	0.5	0.5437	108		-	-	75-125	-	20
Potassium, Total	28.0	10	42.8	148	Q	-	-	75-125	-	20
Selenium, Total	ND	0.12	0.140	117		-	-	75-125	-	20
Silver, Total	ND	0.05	0.0509	102		-	-	75-125	-	20
Sodium, Total	172.	10	226	540	Q	-	-	75-125	-	20
Thallium, Total	ND	0.12	0.1229	102		-	-	75-125	-	20
Vanadium, Total	0.0023J	0.5	0.5423	108		-	-	75-125	-	20

**Project Name:** RIVER PLACE I + II

**Project Number:** 170040901 Lab Number:

L1424443

Report Date:

10/23/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough	Lab Associated	sample(s):	01-02 QC	Batch ID: WG733087	'-4 QC S	ample: L1424443-01	Client ID:	MW-N2_	_101414
Zinc, Total	0.004J	0.5	0.5732	115	-	-	75-125	-	20



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

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

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual RPD Limits
Total Metals - Westborough Lab Associated sample(s)	: 01-02 QC Batch ID:	: WG731654-3 QC Sample:	L1424301-0	1 Client ID	: DUP Sample
Mercury, Total	ND	ND	mg/l	NC	20



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

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

# INORGANICS & MISCELLANEOUS



**Project Name:** RIVER PLACE I + II

Project Number: 170040901

Lab Number:

L1424443

**Report Date:** 10/23/14

**SAMPLE RESULTS** 

Lab ID: Client ID:

L1424443-01 MW-N2\_101414

Sample Location:

650 WEST 42ND STREET

Matrix:

Water

Date Collected:

10/14/14 09:55

Date Received:

10/15/14

Field Prep:

Not Specified

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



**Project Name:** RIVER PLACE I + II

Project Number: 170040901

Lab Number:

L1424443

**Report Date:** 

10/23/14

### **SAMPLE RESULTS**

Lab ID: L1424443-02 MW-S2\_101414 Client ID:

Sample Location:

650 WEST 42ND STREET

Matrix:

Water

Date Collected:

10/14/14 12:55

Date Received:

10/15/14

Field Prep:

Not Specified

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



L1424443

Lab Number:

Project Name: RIVER PLACE I + II

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

Method	<b>Blank</b>	<b>Analysis</b>
Batch	Quality	Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westb	oorough La	b for sam	nple(s): 01	I-02 Ba	tch: WC	9731538-1				
Cyanide, Total	0.001	J	mg/l	0.005	0.001	1	10/16/14 07:00	10/20/14 12:42	1,9010C/9012	в ЈО
General Chemistry - Westh	oorough La	b for sam	nple(s): 01	I-02 Ba	tch: WC	G732547-1				
Cyanide, Physiologically Available	ND		mg/l	0.005	0.00005	1	10/20/14 09:32	10/20/14 16:34	64,9014(M)	JO



Project Name: RIVER PLACE I + II

Project Number: 170040901

Lab Number: L1424443

Parameter	LCS %Recovery Q	LCSD Qual %Recovery		ecovery imits RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s): 0	01-02 Batch: WG731	538-2 WG731538	-3		
Cyanide, Total	100	103	8	0-120 3		20
General Chemistry - Westborough Lab	Associated sample(s): 0	01-02 Batch: WG7325	547-2			
Cyanide, Physiologically Available	93	-	8	0-120 -		
General Chemistry - Westborough Lab	NEGATIVE LCS Associa	ated sample(s): 01-02	Batch: WG73254	17-4		
Cyanide, Physiologically Available	1	-		0-10 -		



Project Name: RIVER PLACE I + II

**Project Number:** 

170040901

Lab Number: L1424443

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery		Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborou N2_101414	ıgh Lab Asso	ciated samp	le(s): 01-02	QC Batch II	D: WG7:	31538-4	WG731538-5	QC San	nple: L14244	143-01	Clien	t ID: MW-
Cyanide, Total	1.00	0.2	1.19	90		1.18	90		80-120	1		20
General Chemistry - Westborou	ugh Lab Asso	ciated samp	le(s): 01-02	QC Batch II	D: WG7:	32547-5	QC Sample:	L142444	3-02 Clier	nt ID: I	MW-S2_	_101414
Cyanide, Physiologically Available	0.327	0.2	0.486	80		-	-		75-125	-		20

Lab Number:

L1424443

Project Number: 170040901

RIVER PLACE I + II

**Project Name:** 

Report Date:

10/23/14

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



Project Name: RIVER PLACE I + II

Lab Number: L1424443 **Report Date:** 10/23/14 Project Number: 170040901

### **Sample Receipt and Container Information**

YES Were project specific reporting limits specified?

Reagent H2O Preserved Vials Frozen on: NA

### **Cooler Information Custody Seal**

Cooler

Α Absent

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



Project Name: RIVER PLACE I + II

Project Number: 170040901

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

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



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

#### **GLOSSARY**

### Acronyms

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

EPA - Environmental Protection Agency.

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

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

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

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

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

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

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

NI - Not Ignitable.

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

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

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

#### Footnotes

SRM

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

#### Terms

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

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

### Data Qualifiers

- A Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations
  of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

Report Format: DU Report with 'J' Qualifiers



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

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

#### **Data Qualifiers**

- G The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I The lower value for the two columns has been reported due to obvious interference.
- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- Q The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- **R** Analytical results are from sample re-analysis.
- **RE** Analytical results are from sample re-extraction.
- S Analytical results are from modified screening analysis.
- Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



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

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

### REFERENCES

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

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

### **LIMITATION OF LIABILITIES**

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

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



### **Certification Information**

Last revised April 15, 2014

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

### Westborough Facility

**EPA 524.2:** Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, lodomethane (methyl iodide), Methyl methacrylate,

Azobenzene.

EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

**EPA 8270D:** 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 625: 4-Chloroaniline, 4-Methylphenol.

SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

### **Mansfield Facility**

EPA 8270D: Biphenyl. EPA 2540D: TSS

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

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

### **Drinking Water**

**EPA 200.8**: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1**: Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C,

SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.

### Non-Potable Water

EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mq,Mn,Mo,Ni,K,Se,Aq,Na,Sr,Ti,Tl,V,Zn;

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC,

SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, SM4500NO3-F,

EPA 353.2: Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4,

SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT,

Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), EPA 600/4-81-045: PCB-Oil.

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.

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

<b>ALPHA</b>	CHAIN O	F CUSTODY	PAGEO	F	Date Rec'd	in Lab:	10/15/14	ALPH	Serial_No:10231410:40 A Job #:
ESTBORO, MA	MANSFIELD, MA	Project Information			Report In	formation	- Data Deliverables	Billin	g Information
EL: 508-898-9220 X: 508-898-9193	TEL: 508-822-9300 FAX: 508-822-3288	Project Name: River	Place Ty		□ FAX	المريدان	EMAIL	Same	e as Client info PO#: 170040901
ient Informatio	n	Project Location: 650 V			ADEx	<b>b</b> A∈	dd'l Deliverables	_	11004000
ent: LANG	AN		40901		Regulatory	Requiren	nents/Report Limits	;	
	lest 31st Street	Project Manager: Nicol		2	State /Fed F	Program	Criteria 7	065	
NY,	NY 10001	ALPHA Quote #:							
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	479 - 5444			-	er.			· ·	
	2 Clangan. com		d (only confirmed if pre-appro		<b>2</b> - 7	/ /	/ / / / /	<del>**/ / </del>	· · ·
These samples hav	e been previously analyzed by Alpha	Date Due:	Time:		S/S	/ / . /	/ / / / /	/	/ / SAMPLE HANDLING
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		4.5					/B/ / //	/-/-/-/	Lab to do
						10/03/		/ / /	Lab to do
_PHA Lab ID ab Use Only)	Sample ID	Collection Date Ti	Sample S me Matrix	Sampler's Initials	/ / / /	,	//////	/ / /	(Please specify below)  Sample Specific Comments  S
443-01	MN-N2-101414	10/14/14 09			1.3.	2//1			Total 8 containers
	NW-52=101414		55 GU		130	, f			Total 8 containers
	WHOI _ 10/4/4	1 1 1 1 1	10 WW	MB	3				Total 3 confainers
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		Relinquished By:	Date/	Fime		Received By		ate/Time	start until any ambiguities are resolved.
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NO: 01-01 (rev. 14-00	т-07)		10-15-	7/89	IU /9	DION LEN	200 / //-/	5:14/	(4) (4) reverse side.



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 ld 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	

Drinking Water Bacterlology		Drinking Water Metals II	
Colliern, Total / E. coll (Qualitative)	SM 18-21 9222B(97)/40CFR141.2	E(F)6i' Beryllium, Total	EPA 200 7 Rev. 4.4
	5M 18-21 9223B (97) (Colliert)		EPA 200,8 Rev. 5.4
Standard Plate Count	SM 18-21.9215B	Nickel, Total	EPA 200.7 Rev. 4,4
Drinking Water Metals I	neth Company	Thallum, Total	EPA 200 8 Rev. 5.4 EPA 200 8 Rev. 5.4
Arsenic, Total Barium, Total	EPA 200.8 Rev. 5.4 EPA 200.7 Rev. 4.4	Drinking Water Metals III	
parious, rotal	EPA 200.8 Rev. 5.4	Galcium Total	EPA 200,7 Rev. 4.4
Cadmium, Total	EPA 200.7 Rev. 4.4	Magnesium Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4	Sodium, Total	EPA 200,7 Rev. 4.4
Chromium, Total	EPA 200.7 Rev. 4.4	Drinking Water Miscellaneous	
	EPA 200.8 Rev. 5.4	Organio Garbon, Total	SM 18-21-5310C (00)
Copper, Total	EPA 200.8 Rev. 4.4	Perchiorate	EPA 332.0 Rev. 1
Iron, Total	EPA 200.7 Rev. 4.4	Drinking Water Non-Metals	
Lead, Total	ERA 200.8 Rev. 5.4	Alkalinity	SM (8-2) 2320B (97)
Manganese, Total	EPA 200.7 Rev. 4.4	Calcium Hardness	EPA 200,7 Rev. 4.4
Mercury, Total	EPA 245.1 Rev. 3.0	Ghloride Color ###	EPA 300 0 Rev. 2.1 SM 18-21 21208 (01)
Selenium, Totali Silver, Total	EPA 200.6 Rev. 5.4 ERA 200.7 Rev. 4.4	Cyanide	SM 18-21 4500-CN E (99)
	EPA 2008 Rev. 5.4	Fluoride, Total	EPA:300:0 Rev. 2:11
Zing Total	EPA 200.7 Rev. 4.4		SM 18-21 4500-F () (97)
	EPA 200.8 Rev. 5.4	Nifrate (as N)	SM 18-21 4500 NO3 F (00)
Drinking Water Metals II		Nitrite (as N)	SM 18-21 4500-NO3 F (00)

### Aluminum, Total

Actimony, Total EPA 200.8 Rev. 5. Solids, Total Dissolved

SM 18-21 2540C (97)

SM 18-21 2510B (97)

# Serial No.: 48541

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CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

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

NY Lab ld 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

121 6/02/19	1800 P. TEN	1200.6	CONTRACTOR OF THE PERSON OF TH	450
THE PERCY	11727256		945535	W 4 7555
III II TOPERA	DOM:	asein	r Non-l	CHAPAIN

#### Volatile Aromatics

Sulfate (as 504)	EPA 300.0 Rev. 2.1	Bromobenzene	EPA 624.2
Drinking Water Tribalomethanes		Chlorobenzene -	EPA 524/2
Bromodichioromelhane	EPA 524.2	Ethyl benzene Hexachlprobutadiene	EPA 524.2
Bromoform Chloroform	EPA 524.2		EPA 524/29
Dibromochloromethane	EPA 524.2	n-Butylbenzene	EPA 524.2
Total Trihalomethanes	EPA 524.2	n-Propylbenzene p-Isopropyltoluene (P-Cymene	EPA 524.2
Fuel Additives	all 5 label as lead	sec-Butylbenzene	EPA 524.2
Methyl tert-butyl ether	EPA 624.2	Styrene	EPA 5242
Naphthalene //	EPA 524.2	tert-Butylbenzene Toluene	EPA 524.2 EPA 524.2
Microextractibles 4.2-Dibromo-3-chicropropane	EPA 5047	Total Xyleries	EPA 524.2
1,2-Dibromoethane	EPA:604:15	Volatile Halocarbons	
Volatile Aromatics		1,1,1,2-Tetrachloroethane	EPA 524:2
1,2,3-Triofilorobenzene	EPA 524.2	- 1,1,1-Trichloroethane	EPA 524:2
1,2,4-Trichlorobenzene	EPA 524.2	1,1,2,2-Tetrachloroetrjane 1,1,2-Trichloroethane	EPA 524.2 EPA 524.2
1,2-Dichlorobenzene	EPA 524.2	1.1aDichloroethane	ERA 524.2
1,3,5-Trimethylbenzene	EPA 529.2	1.1-Dichloroethene	EPA 624.2
1,3-Dichloropenzene	EPA 824.2	1.1-Dichigropropene 1.2.3-Trichloropropane	EPA 524.2 EPA 524.2
1.4-Dichlorobenzene 2-Chlorotoluene	EPA 524.2 EPA 524.2	1 2-Dichloroethane	# EPA 624.2
4-Chlorotoluene	ERA 524.2	1:2-Dichloropropane	EPA 524.2
Berizene .	EPA 524.2	1,3-Dichlorepropane	EPA 524.2

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#### Volatile Halocarbons

2,2-Dichloropropane	EPA 524.2
Bromochloromethane	EPA 524.2
Bromomethane	EFA 524.2
Carbon tetrachloride	EPA 524.2
Chloroethane	EPA 524.2
Chigromethane	EPA 524.2
cis-1,2-Dichloroethene	EPA 524.2
cis-1,3-Dichloropropene	EPA 524.2
Dibremomethane	EPA 524.2
Dichlorodifluoromethane	EPA 524.2
Methylene chloride	EPA 624.2
Tetrachlorogthene	EPA 524.2
trans-1,2-Dichlorgethene	EPA 524.2
trans 1,3-Dichloropropena	EPA 524.2
Trichloroethene	EPA 524.2
Trichlorofluoromethane	EPA 524.2

# Serial No.: 48541

Vinyl chloride

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NY Lab ld No. 11148

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All approved analytes are listed below:

Acrylates Acrolein (Propenal)	EPA 624	Benzidines Benzidine	EPA 925
Acrylonitrile	EPA 8260C		EPA 82700
	EPA 8260C	Chlorinated Hydrocarbon	Pesticides EPA 608
Ethyl methacrylate Amines	EPA 8260C	4,4°DDE	EPA 6081B EPA 608
2-Nitroaniliria 3-Nitroaniling	EPA 8270D EPA 8270D	44 DDT	ÉPA 8081B EPA 808
4-Chioroaniline	EPA 8270D	1,400	EPA:80818
4-Nitroaniline Aniline	EPA 8270D EPA 8270D	Akirin	EPA 608 EPA 8081B
Carbazole	EPA 8270D	alpha-BHC	EPA 608 EPA 6081B
Pyridine	EPA 625 EPA 8270D	Alpha-Ghlordane beta-BHC	EPA 8081B EPA 608
Bacteriology	Van Aman		EPA.8081B
Coliform, Fecal	SM 18-21 9221E (99) SM 18-21 9222D (97)	Chlordane Total	EPA 608 EPA 8081B
Coliform, Total	SM 18-21 9221B (99) SM 18-21 9222B (97)	delta-BHC	EPA 9081B
Standard Plate Count	SM 18-21 92158	Dieldrin	EPA 608 EPA 8081B
Benzidines 3,3'-Dichlorobenzidine	EPA 025	Endástlífan I	EPA 808 EPA 80818
	EPA/8270D	Endosulfanili	EPA 608

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Chlorinated Hydrocarbon Pesticides Endosulfan II	EPA-8081B	Chiorinated Hydrocarbon 2-Chloronaphthalane	18 / PA 8270D
Endosulfan sulfate	EPA 8081B	Hexachlorobenzene	EPA 625 EPA 8270D
Endfin aldehyde	EPA 608 EPA 608	HeXachlorobutadiene  Hexachlorocyclopentadi	EPA 625 EPA 8270D enon ERA 625
Endrin Ketone	EPA 8081B EPA 8081B	Hexachloroethane	EPA 82700 EPA 625 EPA 82700
gamma-Chiordane Heptachior	EPA 8081B EPA 608 EPA 8081B	Chlorophenoxy Acid Ret	ar mean in an hi h
Heptachlor epoxide	EPA 608 EPA 8083E EPA 608	2.4.5.TP (Slivex) 2.440	EPA 8151A EPA 8151A
Lindane Methoxychlor	EPA 8081B EPA 608	Dalapon Dinoseb	EPA 8151A EPA 8151A
Toxaphene	EPA 8081B EPA 8081B	Demand Blochemical Oxygen De Carbonaceous BOD	mand SM 18-21 5210B (01) SM 18-21 5210B (01)
Chlorinated Hydrocarbons  1,2,3 Trichlorobenzene	EPA #260C	Chemical Oxygen Dema	and EPA 410.4 Rev. 2.0 SM 18-21 5220□ (87)
1,2,4,5:Tetrachloropenzene 1,2,4:Trichloropenzene	EPA 8270D - EPA 625	Fuel Oxygenates  Di-isopropyl ether  Ethanol	EPA 8260C EPA 8260C
2-Chioronaphthalene	EPA 8270D EPA 625	Methyl tert butyl ether	EPA 82600

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Fuel Oxygenates			Low Level Polynucle	ar Aromatics		
tert-amyl methyl ether (TAME)	EPA 8260C	umby vendj Diangere, di	Naphthalene Low Lo	evel distribution	EPA 82700 SIM	- 100g
tert-butyl alcohol- tert-butyl ethyl ether (ETBE)	EPA 8260C		Mineral			
Halgethers			Acidity Alkalinity		SM 18-21 2310B,4	33
4-Bromophenylphenyl ether	EPA 625	Mills dis	Chloride		EPA 300.0 Rev. 2	038800 page
	EPA 8270D	attra in the			SM 18-21 4500-CI-	1339914
4-Chlorophenylphenyl ether	EPA 625 EPA 8270D		Fluoride, Total		EPA 300.0 Rev. 2: SM 18-21 4500-F 0	. 0
Bis(2-chloroethoxy)methane	EPA-625		Hardness, Total		EPA 200,7 Rev. 4.	10 10 10 10
Bis(2-chloroethyl)ether	EPA 6270D EPA 625		Sulfate (as SO4)		SM 18-21 2340B (9 EPA 300.0 Rev. 2.	120
	EPA 82700		ua airiyida yah	App <sup>r</sup> Allia	SM 15 426 C	
Bis(2-chlorolsopropyl) ether	EPA 625		Nitroaromatics and I	sophorone		
	EPA 82700		1,3,5-Trinitrobenzer	e and the	EPA 8900	detitiene
Low Level Polynuclear Aromatics Benzo(a)anthracene Low Level	EPA 8270D SIM		1.3 Dinitrobenzene		EPA 8270D EPA 8330	W
Benzo(a)pyrene Low/Level	EPA 8270D SIM		2,4,6-Trinitrotoluene		EPA 8330	
Benzo(b)fluoranthene Low Level	EPA 8270D SIM		2,4-Dinitrotoluene		EPA 625	
Benzo(g,h,i)perylene Low Level Benzo(k)fluoranthene Low Level	EPA 8270D SIM				EPA 8330	in the second
Chrysene Low Level	EPA 8270D SIM		2.6 Dinitrotoluene		EPA 625	HISH
Dibenzo(a,h)anthracene Low Level	EPA 8270D SIM				EPA 8270D EPA 8330	ìW
Fluorene Low Level	EPA 8270D SIM		2-Amino-4,6-dinitrol	oluene	EPA 8330	
Inderio (1,2,3-sd) syrene Low Leve	EPA 8270D SIM		2-Nitrotoluene	SET AND	EPA 8330	

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NY Lab Id No. 11148

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Nitroaromatics and Isophorone 3-Nitrotoluene	EPA 8330	Nutrient Nitrate (as N)	SM 18-21 4500-NO3 F (00)
4-Aming-2.6-dinitrotoluene 4-Nitrotoluene	ÉPA 8330 EPA 8390	Nitiste (as N) Ortrophosphate (as P)	SM 18-21-4500-NO2-B (00) SM 18-21-4500-P E
Hexahydro-1,3,5-trinitro-1,3,5-triazine Isophorone	EPA 8330 EPA 625	Phosphorus, Total Organophosphate Pesticides	SM 18-21 4500-P E
Methyl-2,4,6-trinthophenyinitramine Nitrobenzene	EPA 8270D / EPA 8330 EPA 825	Atrazine Petrojeum Hydrogarbons	EPA 8270D
Octáhydro-tetranitro-tetrazocine	EPÁ 8270D EPÁ 8330 EPÁ 8330	Diesel Range Organics Gasoline Range Organics Phthalate Esters	EPA 8015C EPA 8015C
Nitrosoaminės N-Nitrosodimethylamine	FPA 625/4	Benzyl butyl phihalate	ERA 825 EPA 8270D
N-Nitrosodi-n-propylamine	EPA 8270D EPA 625	Bis(2-einylhexyl) phthalate  Diethyl phthalate	EPA 8270D EPA 8270D
N-Nitrosocliphenylamine	EPA 8270D EPA 626 EPA 8270D	Dimethyl pitthalate	EPA 8270D EPA 625
Nutrient Ammonia (as N)	EPA 350.1 Rev. 2.0	Di-n-butyl phihalate	EPA 8270D EPA 625 EPA 8270D
. Kjeldahl Nilrogen, Total	SM 18 4500-NH3 H EPA 351.1 Rev. 1978 LACHAT 10-107-06:2	DI-n-octyl phthalate	EPA 625 EPA 8270D
Nitrate (as N)	EPA 300.0 Rev. 2.1 EPA 353.2 Rev. 2.0	Polychlorinated Biphonyls PCB-1016	EPA:608

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erann	G - CETAIN -	A6650	-368
D A L	Latilitation atod	Dinham	100
550	ychlorinated	Dilitiony	1.63

#### Polymuclear Aromatics

PCB-4016	EPA 8082A	Benzo(a)pyrene	EPA 8270D
PCB-1221	EPA 608	Benzo(b)fluoranthene	EPA 825
PCB-1232	EPA 8082A EPA 608	Benzo(ghl)perylene	EPA 8270D EPA 625
PCB/242	EPA 8082A EPA 608	Benzo(k)fluoranthene	EPA 8270D
	EPA 8082A	benzo(k)liuprantnene	EPA 625 EPA 8270D
PCB-(248 57 VIIIII 19 19	EPA 8082A	Chrysene mi	EPA 625
PCB-1254	EPA 608	Dipenzo(a,h)anthracene	EPA 8270D EPA 625
PCB-1260	EPA-8082A EPA-608	Fluoranthene	EPA 8270D EPA 625
	ERA 8082A		EPA 8270D
PCB-1262 PCB-1268	EPA 8082A EPA 8082A	Fluorane	EPA 625 EPA 8270D
Polynuclear Aromatics		Indend(1:2,3-cd)pyrene	EPA 625
Acenaphthene	EPA 625 EPA 8270D	Naphthalene	EPA 82700 EPA 625
Acenaphthylene	BPA 625	AND	EPA 8270D
aftrij	EPA 82700	Phonanthrene	EPA 625 EPA 8270D
Anthracene	EPA 625 EPA 8270D	Pyrene Pyrene	EPA 625
Benzo(a)anthracene	EPA 625 EPA 82700	Priority Pollutant Phenois	EPA-8270D
Benzo(a)byrene	EPA 625	2,3,4,6 Tetrachlorophenol	EPA 8270D
ANGEOGRAPH ANGEL WITH THE	AND SHADOW AND SHADOW	HEAT AREA TO THE TANK AND	SHIDS, ANDRESSES, MISS

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Priority Pollutant Phenois		Priority Pollutant Phenois	
2,45 Trichlorophener	EPA 8270D	Phenol	EPA 825 III
2,4,6-Trichlorophenol	EPA 625	Residue	EPA 8270D
	EPA 8270D	/ Solids, Total	SM 18-21 2540B (9
2,4-Dichlorophenol	EPA 625	Solids, Total Dissolved	5M,18-21 2540C (9
2.4-Dimethylphenol	EPA 8270D EPA 625	Solids, Total Suspended	SM 18-21 2540D (9
	EPA 8270D	Semi-Volatile Organics	
2,4-Dinitrophenol	EPA 625	1,1:Bjphenyl 1,2:Dichlorobenzene, Semi-volatile	EPA 8270D EPA 8270D
2-Chlorophenol	EPA 8270D EPA 625	1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
	EPA 8270D	1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methyl-4,6 dinitrophenol	EPA 625	2-Methylnaphthalene	EPA 8270D
2-Methylphenol	EPA 8270D EPA 625	Acetophenone: /Benzaldehyde	EPA 82700
AND THE PROPERTY AND THE	ERA 8270D	Benzels Acid	EPA 8270D
2-Nitrophenol	EPA 825	Henzyl alcohol	EPA 82700
3-Methylphenol	EPA 8270D	Caprolactam  Dibenzofuran	EPA 8270D EPA 8270D
4-Chloro-3-methylphenol	ERA 626	Volatile Aromatics	
	EPA 82700	/1.2.4-Trichlorobenzene, Volatile	EPA 8260C
4-Methylphenol	EPA 8270D	1.2,4-Trimethylbenzene	, EPA 8260C
4-Nitrophenal	EPA 625 EPA 8270D	1.2-Dichlorobenzene	EPA 624
Pentachiorophenol	CON ANG	1,3,5-Trimethylbenzene	EPA 8260C EPA 8260C
	EPA 8270D		

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Volatile Aromatics

1,3-Dichlorobenzene	EPA 624	thefr Winds	141.1,2-Tetrachloroethane	EPA 8260C
and and the training	EPA 8260C		11,1;1-Trichlordethane	ERA 624
1,4-Dichlarobenzene	EPA 624 EPA 8260C		1,1,2,2-Tetrachloroethane	EPA 8260C EPA 624
2-Chlorotojuene	EPA 8260C		<b>47</b>	EPA 8260C
4-Chlorotoluene Benzene	EPA 8260C EPA 824		1,1,2-Trichloro-1,2,2-Trifluor 1,1,2-Trichloroethane	gethane EPA 8260C EPA 624
	EPA 8260C			EPA 8260G
Chlorobenzene	EPA 624		1.1. Dichloroethane	EPA 82800
Ethyl benzene	EPA 624		1,1-Dichlorcethene	EPA 824
Isopropylbenzene	EPA 8260C EPA 8260C		1,1-Dichleropropene	EPA 8260C
Naphibalene, Volatile	EPA 8260C		1,2,3-Trichloropropane 1,2-Dibromo-3-chloropropan	EPA 8260C
n-Butylbenzene n-Bropylbenzene	EPA 8260C EPA 8260C	erika (1966) Shaqoda (1966)	62-2-ibroino-3-cindropropar	EPA 8260C
p-Isopropyltoluene (P-Cymene)	EPA 8260C		1,2-Dibromaethane	EPA 8911 EPA 82600
sec-Butylbenzeneri	EPA 624		1,2-Dichleroethane	EPA 624
tert-Burylbenzene	EPA 82600 EPA 82600		1,2:Dichldropropane	EPA 82600 EPA 624
Tolpede	EPA 624			EHA 8260C
/Total-Xylenes	EPA 8260C EPA 624	hamb	1;3-Dichloropropane	EPA 8260C EPA 8260C
	EPA 8260C		2-Chloroethylviny) ether	EPA 624

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All approved analytes are listed below:

Volatile Halocarbons		Volatile Halocarbons	
Bromochforomethane	EPA 9260C	Methylene chloride	EPA 8260C
Bromodichloromethane	EPA 624 EPA 8260C	, Tetrachloroethene	EPA 624 EPA 8260C
Bremoform	EPA 624	trans-1,2-Dichloroethene	EPA 624
Bromomethane /	EPA 8260C EPA 624	trans-1,3-Dichloropropens	EPA 82600 EPA 624
	EPA 9260C		EPA 8260C
Carbon tetrachlorige	EPA 624	trans-1,4-Dichloro 2-butene	EPA 82600
Chloroethane	EPA 8260C EPA 624	Trichloroethene	EPA 624 EPA 82600
	EPA 8260C	Trichlorofluoromethane	EPA 624
Chloroform	EPA 8260C	Vinyl chloride	EPA 8280C EPA 624
Ghloromethane	EPA 624		EPA 8260C
	EPA 8260C	Volatiles Organics	
cis-1,2-Dichloroethène	EPA 8260C	-1,4-Dioxane	EPA 8280C
cis-1,3-Dichloropropene	ÉPA:624	2-Butanone (Methylethyl ketone 2-Hexanone	EPA 8260C
SHERRY SERVER ASSESS STREET	EPA 82600	4-Mathyl-2-Pentanone	EPA 8260C
Dibromochloromethane	EPA 8260C	Acelone	EPA 8260C
Dibroπometnane	EPA-8260C	Carbon Disulfide Cyclohexane	EPA 82600 EPA 82600
Dichlorodifluoromethane	EPA 8260C	Di-ethyl ether	EPA 82600
Hexachlorobutadiene, Volatile	EPA 8280G	Methyl acetate	EPA 8260C
Methylene chloride	EPA 624	Methyl cyclohexane	EPA 8260C

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MR. CHRISTOPHER WAKEFIELD ALPHA ANALYTICAL 8 WALKUP DR WESTBOROUGH, MA 01581-1019 NY Lab Id No: 11148

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

Volatiles Organics

Wastewater Metals

EPA 8260C Vinyl acetate

Lead, Total

Nickel Total

Wastewater Metals I

EPA 6010C

Barjum, Total

EPA 200.7 Rev. 4.4

EPA 200.7 Rev. 4. Magnesium, Total

EPA 200.8 Rev. 5.4

PA 6010C

EPA 6010C

EPA 200.7 Rev. 4:4 Manganese, Total

EPA 200.8 Rev. 5.4

EPA 6020A

EPA 6010C

EPA 200.7 Rev. 4.4

EPA 6020A

EPA 200.8 Rev. 5.4

EPA 200.7 Rev. 4.4

EPA 6010C

EPA 200 8 Rev. 5

EPA 6020A

EPA 60100

EPA 200.7 Rev. 4.4 Calcium, Total

EPA 6020A

EPA 6010C

Potassium, Total EPA 200.7 Rev

EPA 200.7 Rev. 4/4 EPA 200.8 Rev. 5.4

EPA 6010C

EPA 200.7 Rev. 4.4 Silver, Total

EPA 6010C

EPA 200.8 Rev. 5

EFA 6020A

EPA 60100

EPA 200.7 Rev. 4.4 Copper, Total

EPA 6020A

EPA 200.8 Rev. 5.

EPA 200.7 Rev. 4.4

EPA 60100 EPA 6020A

EPA 6020A

Sodium, Total

EPA 80100

on total

Chromium, Total

EPA 200.7 Rev. 4.4

Wastewater Metals II

EPA 6010C

Aluminum, Total

EPA 200 7 Rev. 4.4 EPA 200.8 Rev. 5.4 EPA 60100

Lead, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev.

Serial No.: 48542

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Page 9 of 11



Expires 12:01 AM April 01, 2014 Issued April 01, 2018

#### 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 ld 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

Arsenic, Total

Seryllium, Total

Chromium VI

Antimony, Total EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4 EPA 6010C

EPA 6020A EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4 EPA 6010C

EPA 6020A

EPA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4

EPA 6010C

EPA 6020A

EPA 7196A SM 18-19 3500 Cr D

EPA 245,1 Rev. 3.0 Mercury, Total

EPA 7470A Selenium, Total

PA 200.7 Rev. 4.4 EPA 200.8 Rev. 5.4

EPA 6010C

EPA 6020A

EPA 200.7 Rev. 4 anadium, Total

> EPA 200.8 Rev. 5 **EPA 6010C**

EPA BOZOA

EPA 200.7 Rev. 4.4 ZinceTotal EPA 200.8 Rev. 5.4

### Wastewater Metals II

Zine, Total

Wastewater Metals III

Cobalt, Total:

Molybdenum, Total

Tin, Total

Titanium, Total

#### Wastewater Miscellancous

Boron, Total

Cyanide Total

Formaldehyde

EPA 60100

EPA 6020A

EPA 200.7 Rev. 4.4

EPA 200 8 Rev.

EPA 6010C EPA 8020A

EPA 200.7 Rev. 4.4

EPA 200,8 Rev. 5.4 EPA(6010C

EPA 6020A

EPA 200.7 Rev.

EPA 200.8 Rev. 5 EPA 60100

EPA 6020A

EPA 200.7 Rev. 4.4

EPA 60100

EPA 200.7 Rev. 4,4

EPA 200.7 Rev. 4.4

EPA 60100 EPA 300.0 Rev. 2.1

SM 18-21 21208 (01)

SM 18-21 4500 CN E (99

EPA 8315A

# Serial No.: 48542

partment of Health. Certificates are valid only a conspictionally posted, and are printed on secure paper; Continued ac-ingoing participation in the Program, Consumers are urged to call (618)

Page 10 of 11



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 Realth 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

SM 18-21 5310C (00) Organic Carbon, Total

EPA 420.1 Rev. 1978 Phenois

SM 14 510C

Silica, Dissolved

EPA 200.7 Rev. 4.4 EPA 120.1 Rev. 1982

Specific Conductance

SM 18-21-2510B (97)

Sulfide (as S)

SM 18-21 4500-S D (00)

Surfactant (MBAS)

SM 18-21 5540C (00)

Total Petroleum Hydrocarbon

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

roperty of the New York State Department of Health, Gertificates are val shown, must be conspicted by posted, and are printed on secure paper, on successful ongoing participation in the Program. Consumers are urgs verify the laboratory's accreditation status.



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# CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE Issued in accordance with and pursuant to section 502 Public Health Law of New York State

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

NY Lab Id No: 11148

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Acrylates Acrolein (Propensi)	EPA.8260C	Chlorinated Hydrocarbon Pestic	ides EPA 8081B
Acrylonitrife  Ethyl methacrylate:	EPA 82600	Aldrin alpha-BHC	EPA 8081B
Amirijes 1,2-Diphenylhydrazine	EPA 8270D	alpha-Chlordane Atrazine beta-BHC	EPA 80818 EPA 8270D EPA 8081B
2-Nitroaniline 3-Nitroaniline 4-Chioroaniline	EPA 8270D EPA 8270D EPA 8270D	Chlordane Total delta-BHC	EPA 80818 EPA 80818
4-Nitroaniline Aniline	EPA 8270D EPA 8270D	Dieldin Endosulfan II. Endosulfan II	EPA 80818 EPA 80818 EPA 80818
Carbazole Benzidínes	EPA 8270D	Endosulfan sulfate Endrin	EPA 8081B EPA 8081B
3,3 Dichlorobenzidine  Benzidine  Characteristic Teating	EPA 8270D EPA 8270D	Endrin aldehyde Endrin Ketone gemma-Chlordane	EPA 8081B EPA 8081B EPA 8081B
Corrosivity	EPA 9040C EPA 9045D	Heptachlor (1995) Heptachlor epoxide	EPA 80818 EPA 80818
Ignitability Synthetic Precipitation Leaching Proc.	EPA 1010A EPA 1039 EPA-1812	Lindane Methoxyphlor Toxophene	EPA 80818 EPA 80818 EPA 80818
TQLP  Chlorinated Hydrocarbon Pesticides	EPA 1311	Chlorinated Hydrocarbons	EPA 8260C
4,4'-DDD	EPA 8081B	1,2,4,5-Tetrachlorobenzene	EPA 8270D

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Page 1 of



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

NY Lab ld No: 11148

8270D SIM

EPA 60100

EPA 6020A

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

All approved analytes are listed below:	EXPENSE.
	CHERNATED
All approved attastes are noted below.	HERED !
ath, Jane to the last the last the sale of the last the last the last the covariant the	<b>2023年</b> 第
	1
Chiorinated Hydrocarbons Low Level Polynuclear Atomatic Hydr	carte
Chlorinated Hydrocarbons Low Level Polynuclear Aromatic Hydr	Sel H
Service and the service of the servi	經期
2-Chteronaphthalene EPA 8270D Benzo(g,h,i)perylene Low Level	EPA

Hexachlorobenzene EPA 8270	DD Benzo(K)fluoranthene Low Level EPA 82700
Hexachlorobutadiene EPA 9276	OD Chrysene tow Level EPA 8270D
Hexachlorocyclopentadlene EPA 827	Dibenzo(aih)anthracene Low Level EPA 8270D
Hexachloroethane EPA(827)	OD Fluoranthene Low Level EPA 8270D:
Chlorephenoxy Acid Pesticides	Fluorene Low Level EPA 8270D
2.4,5 T EPA 815	Indeno(1,2,3-cd)pyrene lipw Level EPA 8270D :
2.4.5-TP (Silvex) EPA 815	Naghthalene Low Level EPA 8270D
60,046	Prienanthrené Low Level EPA 8270D

Pyrane Low Level EPA 82700 SIM Dalapoi

EPA 8151A Dicamba

Barjum, Total Haloethers EPA 8270D 4-Bromophenylphenyl ether

EPA 6010C Cadmium: Total 4-Chlorophenylphenyl ether EPA 8270D EPA 6020A EPA 8270D Bis(2)chloroethoxy)methane Calcium, Total EPA 6010C

EPA 8270D Bis(2-chloroethyl)ether EPA 60100 Chromium, Total EPA 8270D Bis(2-chloroisopropyl) ather

EPA 6020A Low Level Polynuclear Aromatic Hydrocarbons Copper. Total ERA 60100

Acenaphthene Low Level EPA 8270D SIM EPA 6020A

EPA 8270D SIM Acenaphthylene Low Level ron, Total EPA 6010C EPA 8270D SIM Anthracene Low Level

Benzo(a)anthracene Low Level **EPA 8270D SIM** Lead, Total EPA 6010C EPA 8270D SIM

Benzo(a)pyrene Low Level EPA 6020A Benzo(b)fluorantherie Low Level EPA 8270D SIM Magnesium,

## Serial No.: 48543

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All approved analytes are listed below:

A SPINISH A	Metals I Manganese, Total	EPA 6010C		Metals III		EPA 6010C	
	Nickel, Total	EPA 6020A EPA 6010G		Molybdenum, Total		EPA 6020A EPA 6010G	
- C-375.18	Potassium, Total Silver, Total	EPA 6010C EPA 6010C		Thallium Total		EPA 6020A EPA 6010C EPA 6020A	SHEET
100	Sodium Tetel	EPA 8020A EPA 6010C		Tin: Total  Minerals		EPA 6010G	THE STATE OF
N. A. S. R. Z. A. S.	Metals II Aluminum, Total	ERA 8010C		Chloride Sulfate (as SO4)		EPA 9251 EPA 9038	
A	Antimony, Total	EPA 6020A EPA 6010G EPA 6020A		Miscellaneous  Boron, Total  Cyanide: Total	far if	EPA 6010C EPA 6012B	
	Arsenic, Total Beryllium, Total	EPA 60100 EPA 6020A EPA 60100		Formaldehyde		EPA 9014 EPA 8315A	
P. School S.	Chromium VI	EPA 6020A EPA 7196A		Phenois Specific Conducta Nitroaromatics and	" Whuship a	EPA 9050A	
A	Mercury, Total Selenium, Petal	EPA 74718 / EPA 60100 :: EPA 6020A		1,3,5-Trinitrobenze 1,3-Dinitrobenzene	on6 1/	EPA 8330 EPA 8330	TOWNER.
Sala Sala	Vanadium, Total	EPA 6010C EPA 6020A		2,4 6-Trinitrotoluer 2,4-Dinitrotoluene		EPA 8330 EPA 82700	
10000	Zinc, Total	EPA 6020A	ra PA	2,6-Dinifrotoluene		EPA 8270D	
	Vanadium, Total	EPA 6020A EPA 6010C		2,4-Dinitrotoluene		EPA 8270D / EPA:8330	CONTRACTOR POR

## Serial No.: 48543

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Page 3-0



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Nitrogramatics and Isophorone		Phthalate Esters	m# #/
2,6-Dinitrotoluene	EPA 8330	Dimethyl phthalate/	EPA 8270D
2-Amino-4,6 dinitrotoluene	EPA 8330	Dianabuty) phthalate	EPA 8270D
2-Nitrotdiuene	EPA 8330	Di-n-octyl phthalate	EPA 8270D
3-Nitrotoluene	EPA 8330	Polychlorinated Biphenyls	Constitution (III)
4-Amino-2,6-dinitrotoluene	EPA 8330	PCB-1016	EPA 8082A
A-Nitrotoluene ₹	EPA 8330	PCB-1921	EPA 8082A
Hexahydro-1,3,5-trinitro-1,3,5-triazine	EPA 8530 2	PCB-1232	EPA 8082A
Isophorone	EPA 8270D	PCB-1242	EPA 8082A
Melhyl-2,4,5-trinifrophenylnitramine	EPA 8330	PCB-1248	EPA 8082A
Nitrobenzene	EPA 8270D	PC8-1254	EPA 8082
Bheilf Wedl / All	EPA 8330	PCB-1260	EPA 8082A
Octahydro-tetranitro-tetrazocine	EPA 8330	PCB-1262	EPA 8082A
Pyridine	ERA 8270D	PGB-1268	EPA 8082A
Nitrospamines		Polynuclear Aromatic Hydrocarbor	18
N-Nitrosodimethylamine	EPA 8270D	Acenaphthene	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 8270D	Acenaphthylene	EPA 8270D
N-Nitrosodiphenylamine	EPA 82700	Anthracene	EPA 8270D
Petroleum Hydrocarbons		Benzo(a)anthracene	EPA 8270D
Diesel Refige Organics	PA 80150	Benzo(a)pyrene	EPA 8270D
Gasoline Range Organice	EPA 8015G	Benzo(b)fluoranthene	EPA 8270D
Phthalate Esters		Genzo(ghi)perylene	ERA 82700
The Committee of the Co	THE THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TO THE PERSON NAMED IN COLU	Benzo(k)fluoranthene	EPA 8270D
Benzyl butyl phinalate	EPA 8270D	Chrysene	EPA 8270D
Bis(2-ethylnexyi) phthalate	EPA-8270D	Dibenzo(a,h)anthracene	EPA 82700
Diethyl phthalate	EFA-02/00	Fluoranthene	EPA 8270D
A CHARLEST AND	C. THERE AND ADDRESS AND ADDRE	COOL REPRESENTATION STREET, ST	CONTRACTOR STORY

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#### Polynuclear Aromatic Hydrocarbons

#### EPA 8270D Fluorene EPA 8270D Indeno(1,2,3-od)pycana ERA 8270D Naphthalene EPA 8270D Phenanthrene EPA 8270D Pyrene

Hriority Pollutant Phenois	1997 July 1	Singli History
2,3,4.6 Tetrachlorophenol	EP.	A 8270D
2,4,5-Trichlorophenol	HIS EP	A 8270D
2,4,6-Trichlorophenol	ERE TRESCRIPT.	A 8270D
2,4-Dichlarophenal	A THER	A 8270D
2,4-Dimethylphenol	EP EP	A 8270D
2,4-Dinitrophenol	S WELLISCONSISSING AND	A 8270D
2-Chlorophenol	ER	A 8270D
2-Methyl-4,6-dinitrophenol	EP	A 8270D
2-Methylphenol	AND EP	A 8270D

2-Methylphenol	
HEDEL AND HE	His. Min
2-Nitrophenol	OHER SHOW
3-Methylphenol	AND AND THE
4-Chloro-3-meth	hylphenol

NAME OF TAXABLE	Chillian	222	27.00
4-Met	hylphen	ol .	45000
A NUMB	phenol	は温	100
STATE OF STATES	priendi	55000	
Penta	chloropl	nenol	
Phen	REMARKS	· William	9188
120000	ARREST MAY	4000	E-1000

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1,2 Dichlorobe	ustratif.	all Comi vo	Jatila Hill
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496723	365000	407891		2233523	ST.
S22.141	(2.7802E)	EDITOR OF THE	452112	A-2100	М.
Report .	30.00	mi+vo	Jattie	Organi	CS

iii)	1,3 Dichlorobenzene	Sami-ve	A STATE OF	EDA S	2700	þ
	1,4-Dichlorobenzene	a kin in	AND THE REAL PROPERTY.	A EPA	N	
W.,	2-Methylnaphthalene		apolitu (	EPA	270D	
Hara S	Acetophenone	· Eller	柳带	EPA (	3270D	188
133(d) 13	Benzaldehyde	A提達/	4000	EPA 8	3270D	1
ment)	Benzoic Acid	Wath		EPA	3270D	1
	Benzyl alcohol			EPA	3270D	2000
	Caprolactam (1997)		WE ST	EPA	3270D	200
7.4	Ólbenzofuran			EPA	8270D	000
7	Dibenzofuran			EPA	82700	NAC AND AS

m Caprolactain		ACHER STORY	W. Oct Pres
őlbenzofuran 💮			A 8270D
Volatile Aromatics			
1,2,4-Trichlorobenz	ene, Volatile		A 8260C
1,2,4-Trimethylbenz	ene	AND THE RESERVE OF TH	A 8260C
1,2-Dichlaropenzeh		'El	A 8260C
1,3,5-Trimethylbena	ene		A 8260C
/1/3-Dichlorobenzen	e	<b>WARRIED</b>	A 8260C
1,4-Dichlorobenzen	e 4		A 8260C
2-Chlorotoluene		El El	PA 8260C
4-Chlorotoluene			A 8260C
Benzene	4857	anni e	PA 8260C
Bromobenzene	AF AND	100 NE	A 8260C

# Semi-Volatile Organics

,1'-Biphenyl	AND SHAD			8270D
2-Dichlorobe	inzene, Ser	ni-volatile	EPA	8270D
Water American	East, Septemb	799	MC43	

# Ethyl benzene isopropylbenzene

Chloropenzene

Naphtr	ialene	Volatile
T456566889"	101500000	210012504
"-Buty	benze	ene -

# EPA 8260C

EPA 8260C

EPA 8260C

Serial No.: 48543

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EPA 8270D EPA 8270D EPA 82700

5PA 8270D EPA 82700 EPA 8270D

EPA 8270D



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Votatile Aromatics	f by the second of the second	Volatile Hald	icarbons	
n-Propylbenzene	EPA 8260C	Bromodichl	oromethane	EPA 8260C
p-Isopropyltoluene (P-Cymene)	EPA 8260C	Bromoform	CADES AND THE RESIDENCE AND THE PARTY OF THE	EPA 8260C
sec-Butylbenzene	EPA 8260C	Bromometr	が	EPA.82600
Styrene	EPA 8260C	Carbon tetr	achloride ( )	EPA 8260G
tert-Butylberizane	EPA 8260C	Chloroetha		ERA 82600
Toluene	EPA 8260C	Chloroform	The state of the s	EPA 8260C
Total Xylenes	EPA 8260C	Chloromet		EPA 8260C
Volatile Halocarbons	T AND THE TAX	laste of the contradition theres	hloroethene	EPA 82600
,1,1,1,2*Tetrachloroethane	EPA 82600	AND LEWIS CO. TOTAL TOTAL	hloropropene	EPA 82600 EPA 82600
1,1,1-Trichioroethane	EPA 82600	MAY STREET SHIPMONIPALINESS. THE	loromethane	EPA 8260C
1,1,2,2-Tetrachloroethane	EPA 8260C	Dibromom	luoromethane	EPA 8260G
1,1,2-Triphloro-1,2,2-Trifluoroethane	EPA 8260C	Significant Company Company	butadiane. Volatile	EPA 8260C
1,1,2-Trichloroethane	EPA 8260C	Methylene	HE WHITE THE SECOND	EPA 8260C
1,1 Dichloroethane	EPA 82600	Tetrachlore	Alberta Alberta Milita	EPA 8260C
1,1-Dichloroethene	EPA 8260C	Messay and Market School	Dichloroethene	EPA 82600
1;1-Dichloropropene	EPA 8260C	THE COURSE WATER SEEDS AND ASSESSED.	Dichloropropene	EPA 8280C
1,2,3-Trichloropropane	EPA 8280C	HE SEN APPROXIMENT OF	Dichloro-2-butene	EPA 8260C

EPA 8260C 2-Dichloroethane EPA 8260C 1,2-Dichloropropane EPA 8260C 1,3-Dichtoropropane 2,2 Dichloropropane EPA 8260C EPA 8260C 2-Chloroethylvinyl ether EPA 8260C Bromochloromethane

Volatile Organics 1.4-Dioxane 2.Butanone (Methylethyl ketone) EPA 8260C

Trichloroethene

Vinyl chloride

Trichlorofluoromethane

2-Hexanone

EPA 8260C

EPA 8260C

EPA 8260C

EPA 8260C

EPA 82600

Serial No.: 48543

2-Dibromo-3-chibropropane

1,2-Dibromoethane

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#### Volatile Organics

EPA 8260C 4-Methyl-2-Pentanone

EPA 8260C Acetone

EPA 8260C Carbon Disulfide

EPA 8260C Cyclonexane **EPA 8260C** 

Di-ethyl ether

EPA 8260C Methyl acetate

EPA 8260B Methyl cyclohexane

EPA 8260C

EPA 8260C Methyl tert-butyl ether

EPA 82600 tert-butyl alcohol

EPA 8260C Vinyl acetate.

#### Sample Preparation Methods

EPA 3005A

EPA 3050B

EPA 3540C

EPA 3546

EPA 3580A

EPA 5035A

EPA 5035A-L

EPA 9010C

EPA 9030B

Serial No.: 48543

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Page 7 of 7



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

## CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

dilan 502 Public Fleath Law of Nev Issued in accordance with and pursuant to s

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 Aggraditation Conference Standards (2003) for the categor ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below:

1,2-Diphenylhydrazine 2-Nitroaniline 3-Nitroanline

4-Nitroaniline

Carbazole Pyridine

### 3enzidines

3,3 Dichlorobenzidine 3.3' Dimethylbenzidine

Benzidina

### Chlorinated Hydrocarbon Pesticide

4,4-000 44 DDE

4,4-001

alpha-BHC

alpha Chierdar etaBHC

Chlordane Tota delta-BHC

Dieldrin

Endosullan I

## EPA 8270D

EPA 8270D

EPA 8270D **EPA 8270D** 

ERA 8270D

EPA 8270D EPA 8270D

EPA 8270D

# PA 82700

EPA 8270D

EPA 82700

EPA 8081B EPA 8081B

EPA 80818

EPA 80818 EPA 80818

EPA 8081B

EPA 8081B

EPA BO81B EPA 8081B

EPA 2081B

EPA 80818

#### Chlorinated Hydrocarbon Pesticides

Eridosulfan sulfate

Endrin/aldehyde

Entirin Ketoné

gamma-Chlordane . Heptachlor

Heptachlor epoxide tindane.

Metroxychlor

Toxaphene 1/4

#### Chlorinated Hydrocarbons

2,4,5-Tetrachlorobenzene 2,4-Trichlorobenzen

2 Chloronaphthalene

Hexachlorobenzene Hexachlorobutadiene

Hexachlorocyclopentadies

Hexachloroethane Hexachloropropene

# Dissolved Gases

Ethene (Ethylene)

Methane Propane

# EPA 8081B

EPA16081B EPA 80818

EPA 8081B

EPA 8081B EPA 8081B

EPA 8081B

EPA 8081B EPA BOSTE

Sena No.: 49076

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Spires 12:01 AM April 01, 2014 | ssued April 01, 2013 Revised April 18

#### FOR LABORATORY SERVICE GERTIFICATE OF APPROVAL

Issued in accordance will end pursuant to section 502 Public Health Law of New York State

MR JOSEPHIL WATKINS ALPHA ANALYTICAL 320 FORBES BOULEVARD MANSFIELD, MA 02048

NY Lab lo No. 11627

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

ce o	200	107	ranto	223	
22	257	ŌĐ	о.	۲a	TO:
-61	63.1	UŪ		ıπ	t see

4-Bromophenylphenyl ether EPA 8270D 4-Chlorophenylphenyl ether PA 8270D Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ather EPA 8270D EPA 82700

## ow Level Polynuclear Aromatic

Bis(2-chioroisopropyi) ethe

Acenephthene Low Level EPA B270D SIM EPA 8270D SIM Acenaphthylene Low Level EPA 8270D SIM Anthracene Low Level EPA 82700 SIM Benzo(a)anthracene Lo EPA 8270D SIM Benzo(a)pyrene Low Level EPA 82700 SIM Benzoth fluoranthene Low Leve Benza(g,h,l)perylene Low Level EPA 8270D SIM Benzo(k)fluoranthene Low Level EPA 8270D SIM **EPA 8270D SIM** Chrysene Low Level Dibenzo(a,fi)anthracene Low Leve RA 8270D SIM Fluoranthene Low Level EPA 82700 SIM Fluorene Law Level EPA 8270D SIV EPA 8270D SIM Indeno(1:2:3:cd)pyrene Low Lev EPA 8270D SIM Naphthalene Low Level

## Vineral

Phenanthrene Low Level

Pyrene Low Level

### Nitrogromatics and Isophorone

2.4 Dinitrotoluene .6 Dinitrotoluene sophorone Nitrobenzene

#### Nitrosoamines

N Nitrosodimethylamine Nitrosodi-n-propylamine EPA 8270D N.Nitrosodiphenylamine

### Organophosphate Pesticides

Atrazine

#### Petroleum Hydrocarbons

Diesel Range Organics

#### Phthalate Estera

Benzyl bulyl phthalate Bis(2-ethylhexyl) onthalate Diethyl plithalate. Dimethyl pathalate Di nibutyi phthalate Di-n-octyl phil ialete olychlorinated Biphenyls

PCB-1016

# **EPA 8015D**

ERA 8270D

EPA 8270D

# Serial No.: 49076

EPA 8270D SIM

EPA 8270D SIM



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 pursualities section 502 Public Health Law of New Yark-State

JOSEPHIL WATKINS ALPHA ANALYTICAL 320 FORBES BOULEVARD MANSFIELD, MA 02048 NY Lab Id No. 14627

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

Committee of the second	AND THE PROPERTY OF THE PARTY O	AND AND SOUTH AND ADDRESS ASSESSMENT AND ADDRESS ASSESSMENT ADDRESS ASS	
Polychiorinated Biphenyls		Priority Pollutant Phenois	
PCB-1221	EPA 8082A	2.4,5-Trichlorophenol	EPA 8270D
POB-1282	EPA 8082A	2,4,6 Trichlorophenol	EPA 6270D
PCB-1242	EPA-8082A	2,4-Dichlorophenol	EPA 8870D
PCB-1248	EPA 8082A	2.420 methylphenol	EHA/82700
PCB-1254 (11)	EPA 8082A	2.4-Dinitrophenal	EPA 8270D
POB-1260	EPA 8082A	. d2-Ghlorophedott ₽ / E	EPA 8270D
Polynuclear Aromatics.		2 Methyl-4,6-dinitrophenol 59	. EPA 8270D
Acenaphthene	EPA-8270D	2 Methylphenol	EPA-02700
Acenaghthylene	EPA 8270D	2-Nitrophenol 1	EPA 9270D
Anthracene	EPA 82700	3:Methylphenoli: 44-Chloro-3-methylphenol	EPA 92700
Bengo(a)ambilacene	EPA 8270D	4-Methylphenol	EPA 8270D
Benzg(a)pyrene	EPA 82700	4-Nitrophenol	EPA 8270D
Benzo(b)fluoranthene	EPA 82700	Pentantilorophenel	EPA-8270D
Benzoloh)nerviene	EPA 8270D		

EFA.8270D EPA 8270D

EPA 8270D

Dibenzo(tin)anthracene EPA 8270D Fluoranthene

EPA 8270D Fluorene EPA 82700 deno(1,2,3-cd)pyrene EPA 8270D Naphthalene

EPA 8270D Phenanthrene A 8270D Hyrene

Priority Politiant Phenols 2,3,4,6 Toyachlorophenol EPA 82700 Solids, Total Suspended

Semi-Volatile Organics

2-Dichlorobenzene, Semi-volatile 1 3-Dichloropenzene, Semi-ydiatili 1 4-Dichloropenzene, Semi-yolabil EPA 8270D

Methylnaphthalene Acetophenone EPA

Benzyl alcohol

# Serial No.: 49076

Benzo(k)fluoranthene

Chrysene

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#### FOR LABORATORY SERVICE CERTIFICATE OF APPROVAL

Issued in accordance with and pursuant to sealch 502 Public Health Law of New York Sta

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

NY Lab ld No. 1

is hereby APPROVED as an Environmental Laboratory in conformance with the internal Environmental Laboratory Accreditation Conference Standards (2003) for the cated ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below.

Sami-				
12.00	196501	2000	374233	abadin.

EPA 8270D EPA 8270D Dibenzofuran

#### **Nastewater Metals**

Bartum, Total Cadmium, Tota Ohromium, Total Copper Total Iron, Total

Lead, Total Manganese, Tot

Nickel, Total Silver Total

Strontium, Total

## Wastewater Metals II

Aluminum Total Antimony Total Arsenic, Total Beryllium, fotal

Mercury Low Mercury, Total Selenium, Talal

Vanadium, Total

### Wastewater Metals III

Copalt, Total. Melybdenum, Total. Thailium, Total

Wastewater Miscellaneous Specific Conductance

Sample Preparation Methods

EPA-9050A EPA 180.1 Rev

EPA 6020A EPA 6020A

EPA 6020A

EPA 6020A

EPA 6020A

EPA 6020A

EPA 6020A

EPA 60204

EPA 6020A

EPA 6020A

EPA 6020A EPA 8020A

EPA 8020A EPA 6020A

PA 1631E EPA 7470A

EPA 0020A EPA 6020A

# eria No.: 49076

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## CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

MR JOSEPHL WATKINS ALPHA ANALYTICAL 320 FORBES BOULEVARD MANSFIELD, MA 02048

NY Lab ld No. 11627

WHEELER OF

EPA 80818

EPA 8081

EPA-8081E

EPA 8081B

EPA 8081B

EPA 8081B

EPA 8081B

EPA 8081B

EPA 80816

EPA 80818

EPA 8081B

EPA 80818

EPA 8270D

EPA 8081B

EPA 8270

EPA 82700

EPA 8270D

**BPA 8270D** 

EPA 8270D

EPA 82700

EPA 82700

EPA 8270D

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

All approved analytes are listed below

1,2-Diphenylhydrazine

2-Nitroaniline

3 Nitroanilline 4 Chloroanithe

4-Nitroaniline

Anilin

Carbazole

#### Benzidines

3,3'-Dichlorobenzidine Benzidine

Characteristic Testing

Corresivity

#### Chlorinated Hydrocarbon Pesticides

4,4'-DDD

4,4'-DDT

Aldrin

alpha BHC

Chlordane Fotal

alpha Chlordan

EPA 8270D

EPA 8270D

EPA 8270D

**EPA 8270D** 

EPA\8270D EPA 8270D

EPA 8270D

PA 8270D

EPA 90400

EPA 1311

# EPA 9045D

EPA 8081E

EPA 8081

EPA 80818

EPA 80818

EPA 8081B

A 8081B

EPA 80818

Chlorinated Hydrocarbon Pesticides

Dieldrin

Endosullan

Endosulfan II

Endosulfan sulfate

Endrin aldehyde

Endrin Ketone

gamma-Chlordane

Heptachlor

Heptachlor epoxic

Lindane

Methoxychlor

Pentachloronitrobenzen

Toxanhene

Chlorinated Hydrocarbons

2,4,5 Tetrachlorobenzeh

1,2,4-Trienterobenzen

2-Chloronaphthalene

Hexachlorobenzene

Hexachlorobutadiene

lexachiorocyclopentadiene

Hexachloroethane

Hexachloropropene

#### laloethers

4-Bromophenylphenyl ether

EPA 82701

Serial No.: 49077

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## CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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SEPHL WATKINS ALPHA ANALYTICAL 320 FORBES BOULEVARD MANSFIELD, MA 02048

NY Lab Id No. 11627

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

aloe	

4-Chlorophenylphenyl ether **EPA 8270D** EPA 8270D Bis(2 chleroethoxy)methane Bis(2-chloroethyl)ether **EPA 8270D** EPA 8270D Bis(2 chloroisopropyl) ether

#### Low Level Polynuclear Aromatic Hydrocarbons

EPA 8270D SIN Acenaphthene Low Level EPA 8270D SIM. Acenaphthylene Low Leve Anthracene Low Level Benzo(a)anthracene Low Level Benzo(a)pyrene Low Lovel Benzo(b)fluoranthene Low Level Benzo(g,h.:)parylene Low Lavel Benze(k)fluoranthene Low Level

Chrysene Low Level Dibenzo(a,n)anthracene Low Level Fluoranthene Low Leve Fluorene Low Level Indiano(1:2.3-2d)pyrene Low Level

Phenanthrene Low Level Pyrene Low Lev

Barium, Total

Cadmium, Total

Chromium, Total

Naphthalene Low Level

### Metala I

Copper. Total Iron, Total ead, Total Manganese, Total Nickel, Total

Metals II

EPA 8270D SIM PA 8270D SIM Antimony, Total EPA 8270D SIM EPA 8270D SIM Mercury Total

EPA 8270D SIM EPA 82700 SIN **EPA 8270D-SIM EPA 8270D SIM** 

PA 8270D SIM EPA 8270D SIM EPA 82700 SIM PA 8270D SIM

EPA 82700 SIN EPA 8270D SIM

EFA 6020A

EPA 6020A

EPA 8020

EPA 60202 Silver, Tota EPA 6020A

Aluminum, Total

Arsenic, Total Beryllium, Fotal EPA 6020A

EPATA74 EPA 6020A Selenium, Total EPA 6020A Vanadium, Total Zino, Tota EPA 6020

### Metals III

EPA 6020A Cobalt, Total EPA/8020A Molyhdenum, Tota EPA BD20A hallium, total Miscellaneous

# Organic Carbon Total

Nitrogromatics and isophorone

2,4-Dinitrololuene

Serial No.: 49077

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CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE Issued in accordance with and pursuant to section 502 Public mealth Law of New York

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

NY Lab ld No. 11627

EPA 8082/

EPA 8270D ERA 8270D

EPA 8270D

EPA 82700

EPA 82700

EPA 8270D

nereby APPROVED as an Environmental Laboratory in conformance with the ilional Environmental Laboratory Accreditation Conference Standards (2003) for the categor ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE All approved analytes are listed below.

Nitroaromat	District the law and I leave an	on Diving When Bellet 1
SERVER COMPANION SAF	HERSENHEINS U	Chigical

2.6-Dinitrotoluen

isophorone Nitrobenzene

Nitrosoamines

#### EPA 8270D

EPA 8270D

EPA 8270D

EPA 8270D

**EPA 8015D** 

EPA 82700

**EPA 8270D** 

EFA 8270D

FA 8270D

EPA 8270D

**EPA 82700** 

EPA 8082A

EPA 8082A

EPA 8082

EPA 8082A

A 8082A

EPA 8270D. N-Mitrosedi-n-propylamin

EPA 8270D N-Nitrosodiphenylamine

#### Petroleum Hydrocarbon

N-Nitrasodimethylamine

Diesel Range Organics

#### Phthalale Esters

Benzyi butyl phthalate

Bis(2-ethylhexy)) phthalate

Diethyl phthalate

Dimethyl phthalate

Di-n-buty/ phthalate

Di-n-octyl phthalate

#### Polychlorinated Biphenyl

POB-1016

## Polychlorinated Biphenyls

PGB-1254

PGB-126

## Polynuciear Aromatic Hydrocarbons

Acenaphthene

Acenaphthylene

Anthracene Benzo(a)anthracene

Benzo(a)pyrene

Benzo(b)Illuoranihene

Benzo(ghi)perylene

Benzo(k)fluoranthene

### Chrysene

Dipenzo(a h)anthrage

Fluoranthene

Fluorene

Indeno(1.2,34cd)pyrene

Naphthalene

Phenanthrane

#### Priority Pollutant Phendle

4.6 Tetrachlorophenol

2:4:5-Trichlorophenol

2 4 6-Trishidrophen

4 Dichiprophenol

2,4-Dimethylphenol

na No.: 49077

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Expires 12:01 AM April 01, 201 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 Stale

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

NY Lab ld No. 11627

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Sample Preparation Methods

#### Priority Pollutant Phenois

2,4-Dinitrophenol EPA 8270D

EPA 8270D 2-Chlorophenol EPA 8270D 2-Methyl-4.8-dinitropheno

2 Methylphenol EPA 8270D

EPA 82700 2-Nitrophenol

EPA 8270D 3 Methylphenol.

4-Chloro-3-methylphenol EPA 8270D

EPA 8270D 4-Methylphenol 4-Nitrophenol PA 8270D

EPA 8270D Pentachlorophenol

EPA 8270D Phenel

#### Semi-Volatile Organics

1,2-Dichlorobenzene, Semi-volatile EPA 8270D

EPA 8270D 1,3 Dichlorobenzene, Semi-volatile EPA 8270D 1,4-Dichlorobenzene, Semi-volatile

EPA 8270D 2-Methylnaphthalene

EPA 8270D Acetophenone

EPA 8270D Benzolo Adid

Benzyl alcohol

Dibenzofuran EPA 82700

#### ample Preparation Metho

EPA 3050B

EPA 3540C

EPA 3570

## Serial No.: 49077

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nes 12:01 AM April 01, 201 ssued April 01, 2013 Revised April 18, 2013

# CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE Issued in accordance with and pursuant in section 502 Public Health Law of New York Sta

MR. JOSEPH L. WATKINS ALPHA ANALYTICAL 320 FORBES BOULEVARD MANSFIELD, MA 92048

VY Lab ld No.

is hereby APPROVED as an Environmental Laboratory in contormance with the lational Environmental Laboratory Aggreditation Conference Standards (2003) for the category ENVIRONMENTAL ANALYSES AIR AND EMISSIONS
All approved analytes are listed below

		fa II				
Acrylates			ENGLES WHEN AND STREET	le Aromatics		#
Acetonitrile	EPAT	0-15	2-Chlor	otoluene	EPA TO-1	5°
Acryloniitile	APAI	0-15	Benzen	le penzerie	EPA TO 1	
Methyl methacrylate	EPAI	0-15	Ethyl be	<b>高麗學 罗奈子 福疆</b>	EPATON	5
Chlorinated Hydrocar	ions iii		ということは 関連 関連 は はまままま	yjbenzene 🚧 🔞	EPA TO 1	511
1,2,4-Trichlorobenzer	ie EPAT	045	m/p-Xy	lenes .	EPA TO-1	5
Hexachlorobutadiene	EPAT	<b>0</b> -15	o Xyler		EPA 0-1	5
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TO NOT THE PERSON OF	FPATO-10A	AND THE PARTY OF T	<b>発出を 一下に出る 2018年 一 マ語は、1818年</b>

PCB-1242	EPA TO-10A	Polini, addressing than National		- morgenous
PCB-124	AND THE PERSON NAMED AND ADDRESS OF THE PERSON NAMED IN COLUMN	ACCOUNTS AND	1 1 1 Frichlaropthane	EPA TO 15
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PCB 12/18	<b>新疆上山的河外沿外内部</b> 5。	S.	1,1.2,2-Tetrachloroethane	EPATO-15
OK CHY KAY CHY	数据: / 原形_//规矩图序:的时期		1,152/2-1903CHUNDERICHER	
PCB 1254	EPA-TO-10A	MINE		thane EPA TO-15
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CONTROL THE STREET	<b>建</b> 斯拉斯 3/4.7 <b>· · · · · · · · · · · · · · · · · · ·</b>	ACCEPTANCE ACCEPTANCE.	1.1.2-Trichloroethane	EPATOMS

PCB-1262		EPA TO-	"APPLICATIONS		<b>通料</b>	chloroethane		EPA TO-	200
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200			EPA TO-15		Bromodichlor	omethane	EPARQ-	趣
	3.5 Trimethylben	zene:	· 1011111111111111111111111111111111111	- TANK 1 - 2001	<b>,                                    </b>	FARM SE	EPATO	製料
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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 JOSEPHI WATKING ALPHA ANALYTICAL 320 FORBES BOULEVARD MANSFIELD, MA 02048 NY Lab le No

ED as an Environmental Laboratory in conformance with the is hereby APPRO ntal Laboratory Accreditation Conference Standards (2003) for the categor, ENVIRONMENTAL ANALYSES AIR AND EMISSIONS tional Environmental Labor

All approved analytes are listed below:

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2 64 ((1)	deap	e Halo	carno	วทร

EPA TO-15 Carbon tetrachloride PA TO-15 Chleroetharie EPA TO-1 Chloroform Chloromethane EPATO-EPA TO-15 cis-1,2-Dichlemethene EPA TO-15 sis-1.3 Dichleropropene EPA TO-15 Dibromochleromethane

Dichtgrodifiuoromethane Methylane criloride i Tetrachloroethene

transid, 2 Dichlorcethene trans-1,3-Dichloropropene Trichloroethene

Trichlorofluoromethane Vinyl bromide

/myf chloride

## Volatile Chlorinated Organic

Benzyl chloride

Volatile Organic

2-Dichlorotetraffuoroethane ,3-Binadlene

4 Dioxane

2,2,4 Trimethylpentan 2-Butanone (Metaylethy) ke

Acetaldehyde

# Volatile Organics

Acetone Carbon Disulfide Cyclohexane Hexane

Isoproganol Methanol

Methyl tert bultyl ether n-Heptane tert butyl alcohol ... VinyFacetate

EPATO 15

EPA TOME

EPA TO-15 EPA TO-15

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EPA TO-15

EPA TO-1

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EPA TO-15

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EPATO-15 EBA TO-15

EPA 10-15

EPA TO-15 EPA TO-15

EPA TO-15

EPA TO-16

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