

September 5, 2013

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

**RE: Site Management Plan Annual Review – August 2013  
West 42<sup>nd</sup> Street – River Place I & II  
West 41<sup>st</sup> – West 42<sup>nd</sup> Streets  
New York, New York 110036  
NYSDEC BCP Site No. C231012 & 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 Brownfields Cleanup Program (BCP) for the River Place I & II properties (the "Site"). The Site is located between West 41<sup>st</sup> Street and West 42<sup>nd</sup> Street and 11<sup>th</sup> and 12<sup>th</sup> Avenues on the west side of Manhattan, New York. Construction activities have been completed at both portions of the Site (River Place I & II). The last review letter was submitted to you on October 5, 2012.

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, a vapor/water barrier and an environmental easement as described below. The signed and completed New York State Department of Environmental Conservation IC/EC Certification Form is provided as Attachment A.

Cover System – The site cover system includes the building foundation slabs, asphalt parking lots, concrete walkways, and top soil used in landscaped areas. The construction of the cover system is complete. Both building slabs and the park portion between the buildings were inspected by Langan on August 15, 2013 and were observed to be intact. Photographs of site cover are provided as Attachment B.

Inspection of Vapor/Water Barrier – The vapor/water barrier at River Place II was completed in October 2007 and a report documenting the installation was provided to NYSDEC. We inspected the basement and sub cellar areas of River Place II on August 15, 2013 during the inspection of the cover system. There were no new penetrations observed through the slab and vapor barrier.

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

### **Quarterly Groundwater Monitoring**

Quarterly groundwater monitoring was required for the first two years following completion of the remedial construction, as specified in the SMP. On February 28 and March 7, 2009, two groundwater monitoring wells were installed in the park area between RP I and RP II. For this reporting period, Langan performed the second annual monitoring event on October 17, 2012. The second annual groundwater monitoring report is included as Attachment C. The next annual groundwater monitoring event is anticipated to occur in October 2013.

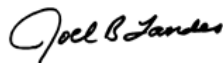
### **Annual Indoor Air Monitoring**

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

### **Closing**

The SMP is being implemented in accordance with the schedules discussed above. Should you have any questions, please contact me at 212-479-5404.

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



Joel B. Landes, P.E.  
Senior Associate

Enclosures:

Attachment A	NYSDEC Institutional and Engineering Controls Certification Form
Attachment B	Site Cover Photographs
Attachment C	Annual Groundwater Monitoring Report- 2012

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

## **Attachment A**

NYSDEC Institutional and Engineering  
Controls Certification Forms

NYSDEC Institutional and Engineering  
Controls Certification Form  
for

River Place I  
NYSDEC BCP Site No. C231024





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



	Site Details	Box 1
<b>Site No.</b> C231024		
<b>Site Name</b> CE - W 42nd St. - River Place I		
Site Address: 640 W 42nd Street	Zip Code: 10036	
City/Town: New York		
County: New York		
Site Acreage: 2.7		
Reporting Period: September 5, 2012 to September 5, 2013		
		YES NO
1. Is the information above correct?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Have any federal, state, and/or local permits (e.g., building; discharge) been issued for or at the property during this Reporting Period?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<b>Box 2</b>
		YES NO
6. Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Are all ICs/ECs in place and functioning as designed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM.</b>		
A Corrective Measures Work Plan must be submitted along with this form to address these issues.		
_____ Signature of Owner, Remedial Party or Designated Representative		_____ Date

		Box 2A
		YES    NO
8.	Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	<input type="checkbox"/> <input checked="" type="checkbox"/>
<p><b>If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.</b></p>		
9.	Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	<input checked="" type="checkbox"/> <input type="checkbox"/>
<p><b>If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.</b></p>		

SITE NO. C231024		Box 3
<b>Description of Institutional Controls</b>		
<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
10890001	River Place I, LLC	Ground Water Use Restriction Landuse Restriction Site Management Plan Soil Management Plan

SITE NO. C231024		Box 4
<b>Description of Engineering Controls</b>		
<u>Parcel</u>	<u>Engineering Control</u>	
10890001	Subsurface Barriers	
<b>Control Description for Site No. C231024</b>		
<p><b>Parcel: 10890001</b></p> <p>Annual reports on quarterly groundwater monitoring and annual indoor air monitoring events are required as well as an annual certification that the ground cover is intact as well as the continued effectiveness of the newly-installed vapor barrier and that the groundwater restrictions are still in force.</p>		

**Periodic Review Report (PRR) Certification Statements**

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

- a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;
- b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

☒ ☐

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

- (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;
- (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;
- (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;
- (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and
- (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

☒ ☐

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

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

\_\_\_\_\_  
Signature of Owner, Remedial Party or Designated Representative

\_\_\_\_\_  
Date

IC CERTIFICATIONS  
SITE NO. C231024

Box 6

**SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE**

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

I William R. Dacunto at 7 World Trade Center, 250 Greenwich St.  
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.

[Signature]  
Signature of Owner or Remedial Party Rendering Certification

9/5/13  
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.

I Alan R. Poeppel at 21 Penn Plaza, NY, NY 10001  
print name print business address

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

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



9/5/13  
Date

NYSDEC Institutional and Engineering  
Controls Certification Form  
for

River Place II  
NYSDEC BCP Site No. C231012



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



Site No.	Site Details	Box 1
C231012	<b>Site Name</b> CE - W 42nd St. - River Place II  <b>Site Address:</b> West 41st - West 42nd Sts. <b>Zip Code:</b> 10036 <b>City/Town:</b> New York <b>County:</b> New York <b>Site Acreage:</b> 1.1  <b>Reporting Period:</b> September 5, 2012 to September 5, 2013	
		<b>YES      NO</b>
1. Is the information above correct?		<input checked="" type="checkbox"/> <input type="checkbox"/>
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?		<input type="checkbox"/> <input checked="" type="checkbox"/>
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?		<input type="checkbox"/> <input checked="" type="checkbox"/>
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?		<input type="checkbox"/> <input checked="" type="checkbox"/>
<b>If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.</b>		
5. Is the site currently undergoing development?		<input type="checkbox"/> <input checked="" type="checkbox"/>
		<b>Box 2</b>
		<b>YES      NO</b>
6. Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial		<input checked="" type="checkbox"/> <input type="checkbox"/>
7. Are all ICs/ECs in place and functioning as designed?		<input checked="" type="checkbox"/> <input type="checkbox"/>
<b>IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM.</b>		
<b>A Corrective Measures Work Plan must be submitted along with this form to address these issues.</b>		
_____ Signature of Owner, Remedial Party or Designated Representative		_____ Date

<b>Box 2A</b>	
	YES    NO
<p>8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?</p> <p><b>If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.</b></p>	<p><input type="checkbox"/>    <input checked="" type="checkbox"/></p>
<p>9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)</p> <p><b>If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.</b></p>	<p><input checked="" type="checkbox"/>    <input type="checkbox"/></p>

<b>SITE NO. C231012</b>		<b>Box 3</b>
<b>Description of Institutional Controls</b>		
<u>Parcel</u> 10890003	<u>Owner</u> River Place 2 LLC/C	<u>Institutional Control</u>  Ground Water Use Restriction Landuse Restriction Site Management Plan Soil Management Plan

<b>Description of Engineering Controls</b>		<b>Box 4</b>
<u>Parcel</u> 10890003	<u>Engineering Control</u>  Cover System Subsurface Barriers Vapor Mitigation	
<hr style="border: 0; border-top: 1px solid black; margin: 10px 0;"/> <p><b>Control Description for Site No. C231012</b></p> <p><b>Parcel: 10890003</b></p> <p>Annual reports on quarterly groundwater monitoring and annual indoor air monitoring events are required as well as an annual certification that the ground cover is intact as well as the continued effectiveness of the newly-installed vapor barrier and that the groundwater restrictions are still in force.</p>		

**Periodic Review Report (PRR) Certification Statements**

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

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

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

YES NO

☒ ☐

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

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

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

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

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

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

YES NO

☒ ☐

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

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

\_\_\_\_\_  
Signature of Owner, Remedial Party or Designated Representative

\_\_\_\_\_  
Date



IC CERTIFICATIONS  
SITE NO. C231012

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.

William R. Dacunto at World Trade Center, 250 Greenwich St.  
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.

[Signature]  
Signature of Owner or Remedial Party Rendering Certification

9/5/13  
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.

Alan R. Poeppel at 21 Penn Plaza, NY, NY 10001  
print name print business address

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

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



Stamp  
(Required for PE)

9/5/13  
Date

**Attachment B**  
Site Cover Photographs



**Photograph No. 1: View of paved walkway/driveway area located between River Place II buildings (North and South Towers).**



**Photograph No. 2: View of hallway floor in lower level of River Place II.**



**Photograph No. 3: View of hallway floor in lower level of River Place II.**



**Photograph No. 4: View of surface cover inside the boiler room of River Place II.**





**Photograph No. 5: View of surface cover inside laundry room of River Place II.**



**Photograph No. 6: View of cellar floor in the pump room of River Place II.**



**Photograph No. 7: View of cellar floor in the water meter room of River Place II.**

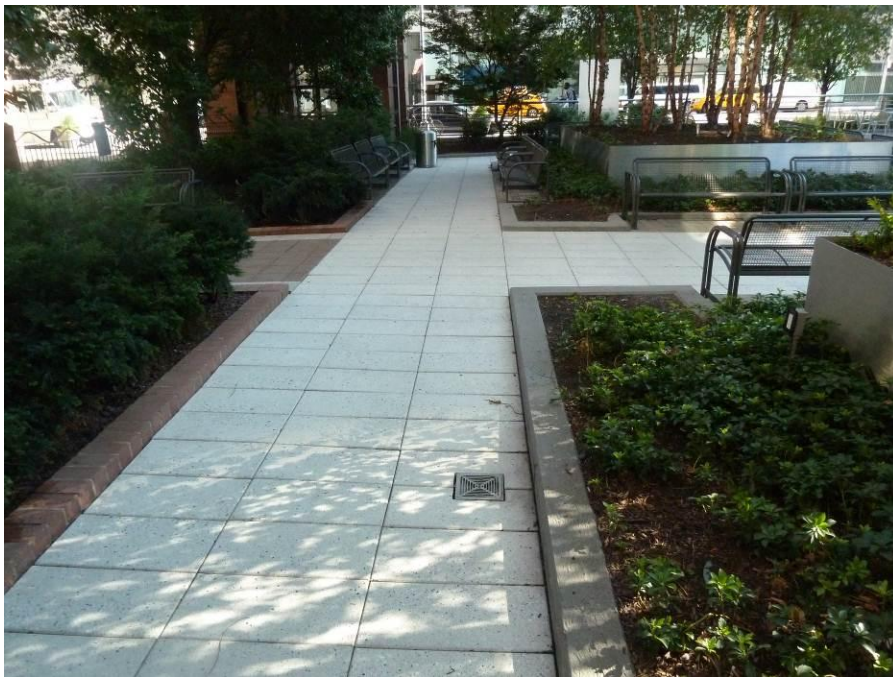


**Photograph No. 8: View of basement parking ramp at River Place II.**

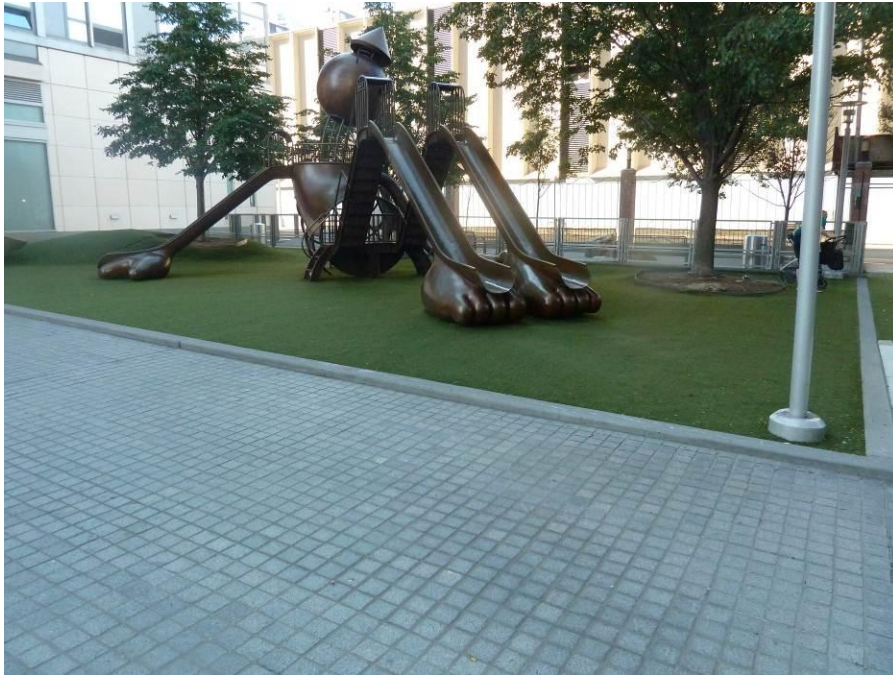




**Photograph No. 9: View of paved walkway area located between River Place I and River Place II on West 42<sup>nd</sup> Street.**



**Photograph No. 10: View of landscaped area between River Place I and II buildings.**



**Photograph No. 11: View of landscaped area and capped driveway/walkway around the playground near River Place I building.**



**Photograph No. 12: View of capped driveway/walkway area located in front of the River Place I building entrance.**





**Photograph No. 13: View of concrete floor in lowest level of River Place I.**



**Photograph No. 14: View of hallway floor in lower level of River Place I.**



**Photograph No. 15: View of surface cover inside restaurant on ground floor of River Place I.**



**Photograph No. 16: View of concrete floor in mechanical room of River Place I.**





**Photograph No. 17: View of surface cover inside bowling alley on ground floor of River Place I.**



**Photograph No. 18: View of paved walkway area located in front of the River Place I on West 42<sup>nd</sup> Street facing west.**

## **Attachment C**

Annual Groundwater Monitoring Report -  
2012

November 21, 2012

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

**RE: Annual Groundwater Monitoring Report - 2012  
River Place I & II  
West 42<sup>nd</sup> Street, New York, New York  
BCP Site No. C231024, C231012  
Langan Project No.: 170040901**

Dear Mr. MacNeal:

Langan Engineering & Environmental Services, PC (Langan) is pleased to present this letter report summarizing groundwater monitoring well sampling activities for River Place I & II located between West 41<sup>st</sup> and West 42<sup>nd</sup> Streets and 11<sup>th</sup> 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 (June 17, 2009, September 18, 2009, January 7, 2010, March 1, 2010, July 14, 2010, September 8, 2010, and December 15, 2010). Following the 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 second annual sampling event conducted on October 17, 2012.

### **2012 Annual Groundwater Sampling**

On October 17, 2012, 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 in Attachment A of this report.

Prior to collecting groundwater samples, MW-N2 and MW-S2 were purged using low-flow purge and sample techniques. The wells were purged using clean, dedicated, polyethylene tubing attached to a Waterra positive displacement pump. During purging, groundwater was monitored for dissolved oxygen, pH, 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 80% or more of the static water level.

MW-N2 and MW-S2 were purged until physical and chemical parameters stabilized. Approximately 9.75 and 8 gallons were purged from each monitoring well, respectively. After purging, samples MW-N2-101712 and MW-S2-101712 were collected using a Waterra pump and dedicated tubing.

The groundwater samples, MW-N2-101712 and MW-S2-101712 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. One trip blank was included for quality assurance/quality control (QA/QC) purposes. The groundwater samples were analyzed for VOCs by EPA Method 8260, 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. The trip blank was analyzed for VOCs by EPA Method 8260.

## Findings

### Observations

During this sampling event no free product was observed in MW-N2 and MW-S2. The wells were observed to be in good condition.

### Groundwater Analytical Results

Analytical results for the second annual 2012 monitoring event that exceeded the NYSDEC TOGS 1.1.1 AWQS Class GA Standards are summarized below.

MW-N2	
<b>VOCs</b>	
• benzene	• naphthalene
• p/m-xylene	• ethylbenzene
• o-xylene	• 1,2,4-trimethylbenzene
• toluene	
<b>SVOCs</b>	
• 2,4-dimethylphenol	• fluorene
• acenaphthene	• phenanthrene
• naphthalene	
<b>Inorganics</b>	
• iron	• magnesium
• manganese	• sodium

MW-S2	
<b>VOCs</b>	
• benzene	• naphthalene
• p/m-xylene	• ethylbenzene
• o-xylene	• isopropylbenzene
• n-propylbenzene	• 1,2,4-trimethylbenzene
<b>SVOCs</b>	
• acenaphthene	• benzo(b)fluoranthene
• benzo(a)pyrene	• indeno(1,2,3-cd)pyrene
• chrysene	• naphthalene
<b>Inorganics</b>	
• iron	• magnesium
• sodium	• lead
• mercury	• manganese

Analytical results for the First Quarter 2009 through Second Annual 2012 sampling rounds are summarized in Tables 1 through 3 and the laboratory analytical report for the 2012 annual sampling results is included as Attachment B.

Please contact us if you have any questions.

Sincerely,  
**Langan Engineering & Environmental Services, P.C.**



Joel B. Landes, P.E.  
Senior Associate

Enclosure(s):

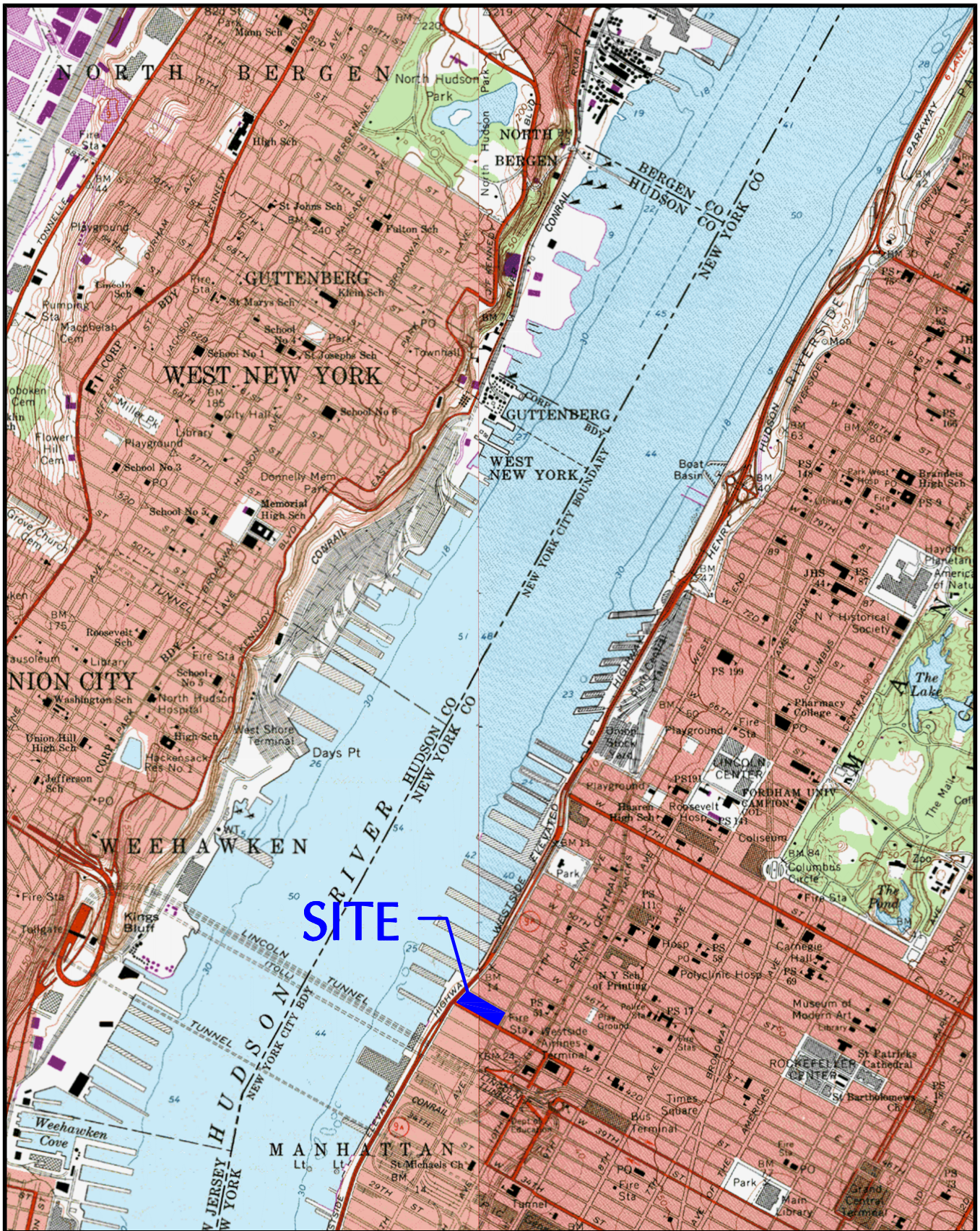
Figure 1	Site Location Map
Figure 2	Well Location Map
Table 1	VOC Detections in Groundwater Samples
Table 2	SVOC Detections in Groundwater Samples
Table 3	Total Metals and Cyanide in Groundwater Sample
Attachment A	Groundwater Sampling Forms
Attachment B	Laboratory Analytical Reports, Chain-of-Custody and Certifications

cc:

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

## FIGURES





21 Penn Plaza, 8th Floor New York, NY 10001  
P: 212.479.5400 F: 212.479.5444  
www.langan.com

NEW JERSEY PENNSYLVANIA NEW YORK CONNECTICUT FLORIDA NEVADA

NJ Certificate of Authorization No: 24GA27996400

Project

## SITE LOCATION MAP

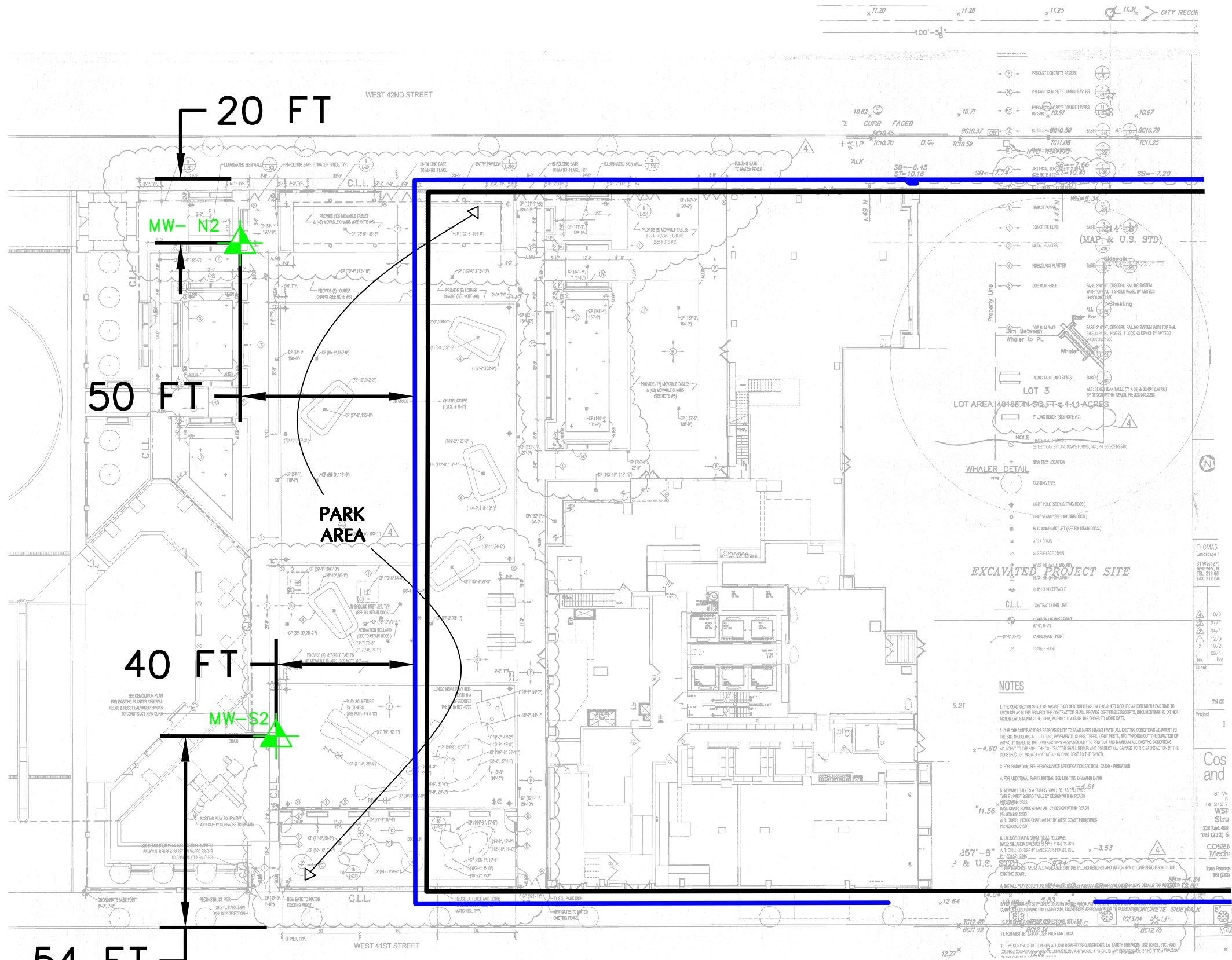
RIVER PLACE I AND II

NEW YORK

NEW YORK

Project No.	Date	Scale	Dwg. No.
170040901	04/07/09	NTS	1

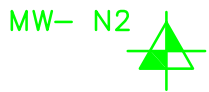




NOTES:

1. BASEMAP TAKEN FROM MANHATTAN-SURVEYING ARCHITECTURAL SURVEY DATED JUNE 3, 2006 AND PARK LAYOUT AND MATERIALS PLAN BY COSTAS KONDYLLIS AND PARTNERS LLP ARCHITECTS DATED OCTOBER 1, 2008.
2. MONITORING WELLS WERE RE-INSTALLED ON DECEMBER 28, 2009. LOCATIONS ARE APPROXIMATE.

LEGEND



APPROXIMATE LOCATION OF MONITORING WELLS IN ACCORDANCE WITH SITE MANAGEMENT PLAN



SHEET PILE WALL



PROPERTY BOUNDARY (RIVER PLACE II)



21 Penn Plaza, 8th Floor New York, NY 10001  
P: 212.479.5400 F: 212.479.5444  
www.langan.com

NEW JERSEY PENNSYLVANIA NEW YORK CONNECTICUT FLORIDA NEVADA

NJ Certificate of Authorization No: 24GA27996400

Project

MONITORING WELL LOCATION MAP

RIVER PLACE I & II

NEW YORK

NEW YORK

Project No.  
170040901

Date  
01/21/2010

Scale  
1" = 30'

Dwg. No.  
2

## **TABLES**

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

		Park Area Northern Well									
		1st Quarter 2009	2nd Quarter 2009	3rd Quarter 2009*	4th Quarter 2009**	1st Quarter 2010	2nd Quarter 2010	3rd Quarter 2010	4th Quarter 2010	YEAR 1 - 2011	YEAR 2 - 2012
SAMPLING DATE	NYSDEC TOGS	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
LANGAN SAMPLE ID	1.1.1 AWQS	MW-N-3-16-09	MW-N-6-17-09	MW-N-9-18-09	MW-N2-1-07-10	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
LAB SAMPLE ID		L0903143-01	L0908040-01	L0913185-01	L1000282-01	L1003006-01	L1008735-02	L1013903-01	L1020042-01	L1116955-02	
Volatile Organics by GC/MS (µg/L)											
Westborough Lab											
1,2,4-Trimethylbenzene	5	1200 U, D <sup>500</sup>	1200 U, D <sup>500</sup>	1200 U, D <sup>500</sup>	1200 U	250 U, D <sup>100</sup>	500 U, D <sup>200</sup>	620 U, D <sup>250</sup>	620 D <sup>250</sup>	270 J	240 J
1,3,5-Trimethylbenzene	5	1200 U, D <sup>500</sup>	1200 U, D <sup>500</sup>	1200 U, D <sup>500</sup>	1200 U	250 U, D <sup>100</sup>	500 U, D <sup>200</sup>	620 U, D <sup>250</sup>	620 U, D <sup>250</sup>	96 J	620 U
Benzene	1	19000 D <sup>500</sup>	17000 D <sup>500</sup>	15000 D <sup>500</sup>	2900 D <sup>500</sup>	610 D <sup>100</sup>	1100	2100 D <sup>250</sup>	2400 D <sup>250</sup>	2400	1600
Ethylbenzene	5	1900 D <sup>500</sup>	1900 D <sup>500</sup>	1800 D <sup>500</sup>	1400 D <sup>500</sup>	170 D <sup>100</sup>	410	810 D <sup>250</sup>	980 D <sup>250</sup>	810	580 J
Isopropylbenzene	5	250 U, D <sup>500</sup>	250 U, D <sup>500</sup>	250 U, D <sup>500</sup>	250 U	50 U, D <sup>100</sup>	100 U, D <sup>200</sup>	120 U, D <sup>250</sup>	120 U, D <sup>250</sup>	37 U	620 U
Methylene chloride	5	2500 U, D <sup>500</sup>	2500 U, D <sup>500</sup>	2500 U	2500 U	500 U, D <sup>100</sup>	1000 U, D <sup>200</sup>	1200 U, D <sup>250</sup>	1200 U, D <sup>250</sup>	110 U	620 U
Naphthalene	10	15000 D <sup>500</sup>	18000 D <sup>500</sup>	19000 D <sup>500</sup>	22000 D <sup>500</sup>	4200 D <sup>100</sup>	5400	12000 D <sup>250</sup>	15000 D <sup>250</sup>	10000	9200
n-Butylbenzene	5	250 U, D <sup>500</sup>	250 U, D <sup>500</sup>	250 U	250 U	50 U, D <sup>100</sup>	100 U, D <sup>200</sup>	120 U, D <sup>250</sup>	120 U, D <sup>250</sup>	39 U	620 U
n-Propylbenzene	5	250 U, D <sup>500</sup>	250 U, D <sup>500</sup>	250 U, D <sup>500</sup>	250 U	50 U, D <sup>100</sup>	ND U, D <sup>200</sup>	120 U	120 U	35 U	620 U
o-Xylene	5	1400 D <sup>500</sup>	1400 D <sup>500</sup>	1200 D <sup>500</sup>	1000 D <sup>500</sup>	180 D <sup>100</sup>	330	590 D <sup>250</sup>	760 D <sup>250</sup>	630	470 J
p/m-Xylene	5	3200 D <sup>500</sup>	3100 D <sup>500</sup>	2900 D <sup>500</sup>	2200 D <sup>500</sup>	330 D <sup>100</sup>	600	1100 D <sup>250</sup>	1400 D <sup>250</sup>	1200	760
p-Isopropyltoluene	5	250 U, D <sup>500</sup>	250 U, D <sup>500</sup>	250 U	250 U	50 U, D <sup>100</sup>	100 U, D <sup>200</sup>	120 U, D <sup>250</sup>	120 U, D <sup>250</sup>	38 U	620 U
Styrene	5	500 U, D <sup>500</sup>	500 U, D <sup>500</sup>	500 U	500 U	100 U, D <sup>100</sup>	200 U, D <sup>200</sup>	250 U, D <sup>250</sup>	250 U, D <sup>250</sup>	72 U	620 U
Toluene	5	4200 D <sup>500</sup>	4400 D <sup>500</sup>	4100 D <sup>500</sup>	740 D <sup>500</sup>	75 U, D <sup>100</sup>	150 U, D <sup>200</sup>	290 D <sup>250</sup>	420 D <sup>250</sup>	410	240 J

**Notes:**

- 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).
- Values exceeding NYSDEC TOGS 1.1.1 AWQS are
- Method Detection Limits (MDLs) are elevated above
- µg/L: Micrograms per liter
- \* Monitoring well MW-S was destroyed during
- \*\* Monitoring wells MW-N and MW-S were destroyed

**Qualifiers:**

U - Indicates the minimum detection Limit (MDL) is reported. The concentration of the analyte is less than the

D<sup>x</sup> - Dillution factor of X

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

		Park Area Southern Well*									
		1st Quarter 2009	1st Quarter 2009	2nd Quarter 2009	4th Quarter 2009**	1st Quarter 2010	2nd Quarter 2010	3rd Quarter 2010	4th Quarter 2010	YEAR 1 - 2011	YEAR 2 - 2012
SAMPLING DATE	NYSDEC TOGS	3/16/2009	3/16/2009	6/17/2009	1/7/2010	3/1/2010	6/10/2010	9/8/2010	12/15/2010	10/17/2011	10/17/2012
LANGAN SAMPLE ID	1.1.1 AWQS	MW-S-3-16-09	DUP-3-16-09	MW-S-6-17-09	MW-S2-1-07-10	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
LAB SAMPLE ID		L0903143-02	L0903143-03	L0908040-02	L1000282-02	L1003006-02	L1008735-01	L1013903-02	L1020042-02	L1116955-01	
Volatile Organics by GC/MS (µg/L)			Duplicate of MW-N-3-16-09								
Westborough Lab											
1,2,4-Trimethylbenzene	5	76 D <sup>25</sup>	1200 U, D <sup>500</sup>	25 U, D <sup>10</sup>	280 D <sup>10</sup>	130 D <sup>50</sup>	180 D <sup>50</sup>	150 U, D <sup>50</sup>	200 D <sup>50</sup>	45	79
1,3,5-Trimethylbenzene	5	62 U, D <sup>25</sup>	1200 U, D <sup>500</sup>	25 U, D <sup>10</sup>	61 D <sup>10</sup>	120 U, D <sup>50</sup>	120 U, D <sup>50</sup>	120 U, D <sup>50</sup>	120 U, D <sup>50</sup>	1 U	3 J
Benzene	1	140 D <sup>25</sup>	19000 D <sup>500</sup>	170 D <sup>10</sup>	200 D <sup>10</sup>	75 D <sup>50</sup>	120 D <sup>50</sup>	110 D <sup>50</sup>	120 D <sup>50</sup>	23	94
Ethylbenzene	5	160 D <sup>25</sup>	1900 D <sup>500</sup>	20 D <sup>10</sup>	710 D <sup>10</sup>	330 D <sup>50</sup>	590 D <sup>50</sup>	460 D <sup>50</sup>	560 D <sup>50</sup>	100	260
Isopropylbenzene	5	35 D <sup>25</sup>	250 U, D <sup>500</sup>	5.4 D <sup>10</sup>	64 D <sup>10</sup>	30 D <sup>50</sup>	61 D <sup>50</sup>	44 D <sup>50</sup>	63 D <sup>50</sup>	13	55
Methylene chloride	5	120 U, D <sup>25</sup>	2500 U, D <sup>500</sup>	50 U, D <sup>10</sup>	420 D <sup>10</sup>	250 U, D <sup>50</sup>	250 U, D <sup>50</sup>	250 U, D <sup>50</sup>	250 U, D <sup>50</sup>	2.7 U	6.2 U
Naphthalene	10	610 D <sup>25</sup>	15000 D <sup>500</sup>	350 D <sup>10</sup>	4900 D <sup>10</sup>	1800 D <sup>50</sup>	1700 D <sup>50</sup>	1900 D <sup>50</sup>	1100 D <sup>50</sup>	170	150
n-Butylbenzene	5	12 U, D <sup>25</sup>	250 U, D <sup>500</sup>	5 U, D <sup>10</sup>	6.2 D <sup>10</sup>	25 U, D <sup>50</sup>	25 U, D <sup>50</sup>	25 U, D <sup>50</sup>	25 U, D <sup>50</sup>	0.98 U	6.2 U
n-Propylbenzene	5	19 D <sup>25</sup>	250 U, D <sup>500</sup>	5 U, D <sup>10</sup>	42 D <sup>10</sup>	25 U, D <sup>50</sup>	37 D <sup>50</sup>	30 D <sup>50</sup>	37 D <sup>50</sup>	8.5	34
o-Xylene	5	43 D <sup>25</sup>	1300 D <sup>500</sup>	16 D <sup>10</sup>	320 D <sup>10</sup>	110 D <sup>50</sup>	150 D <sup>50</sup>	70 D <sup>50</sup>	50 U, D <sup>50</sup>	24	20
p/m-Xylene	5	50 D <sup>25</sup>	3100 D <sup>500</sup>	21 D <sup>10</sup>	410 D <sup>10</sup>	150 D <sup>50</sup>	150 D <sup>50</sup>	82 D <sup>50</sup>	50 U, D <sup>50</sup>	17	9.2
p-Isopropyltoluene	5	12 U, D <sup>25</sup>	250 U, D <sup>500</sup>	5 U, D <sup>10</sup>	11 D <sup>10</sup>	25 U, D <sup>50</sup>	25 U, D <sup>50</sup>	25 U, D <sup>50</sup>	25 U, D <sup>50</sup>	0.94 U	6.2 U
Styrene	5	25 U, D <sup>25</sup>	500 U, D <sup>500</sup>	10 U, D <sup>10</sup>	40 D <sup>10</sup>	50 U, D <sup>50</sup>	50 U, D <sup>50</sup>	50 U, D <sup>50</sup>	50 U, D <sup>50</sup>	1.8 U	6.2 U
Toluene	5	19 U, D <sup>25</sup>	4000 D <sup>500</sup>	29 D <sup>10</sup>	180 D <sup>10</sup>	46 D <sup>50</sup>	38 U, D <sup>50</sup>	38 U, D <sup>50</sup>	38 U, D <sup>50</sup>	8.5	4.2 J

Notes:

- 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).
- Values exceeding NYSDEC TOGS 1.1.1 AWQS are
- Method Detection Limits (MDLs) are elevated above
- µg/L: Micrograms per liter
- \* Monitoring well MW-S was destroyed during
- \*\* Monitoring wells MW-N and MW-S were destroyed

Qualifiers:

U - Indicates the minimum detection Limit (MDL) is reported. The concentration of the analyte is less than the

D<sup>x</sup> - Dillution factor of X

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

		Quality Control										
		1st Quarter 2009	1st Quarter 2009	2nd Quarter 2009	3rd Quarter 2009	4th Quarter 2009	1st Quarter 2010	2nd Quarter 2010	3rd Quarter 2010	4th Quarter 2010	YEAR 1 - 2011	YEAR 2 - 2012
SAMPLING DATE	NYSDEC TOGS	3/16/2009	3/16/2009	6/17/2009	6/17/2009	1/7/2010	3/1/2010	6/10/2010	9/8/2010	12/15/2010	10/17/2011	10/17/2012
LANGAN SAMPLE ID	1.1.1 AWQS	FB-3-16-09	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
LAB SAMPLE ID		L0903143-04	L0903143-05	L0908040-03	L0913185-02	L1000282-03	L1003006-03	L1008735-03	L1013903-03	L1020042-03	L1116955-03	
Volatile Organics by GC/MS (µg/L)												
Westborough Lab												
1,2,4-Trimethylbenzene	5	2.5 U	2.5 U	2.5 U	0.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.27 U	2.5 U
1,3,5-Trimethylbenzene	5	2.5 U	2.5 U	2.5 U	0.75 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.21 U	2.5 U
Benzene	1	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.19 U	0.5 U
Ethylbenzene	5	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.26 U	2.5 U
Isopropylbenzene	5	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.19 U	2.5 U
Methylene chloride	5	5 U	5 U	5 U	0.5 U	5 U	5 U	5 U	5 U	5 U	0.54 U	2.5 U
Naphthalene	10	2.5 U	2.5 U	2.5 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.22 U	2.5 U
n-Butylbenzene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.20 U	2.5 U
n-Propylbenzene	5	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.19 U	2.5 U
o-Xylene	5	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	0.33 U	2.5 U
p/m-Xylene	5	1 U	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	0.35 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	0.19 U	2.5 U
Styrene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.36 U	2.5 U
Toluene	5	0.75 U	0.75 U	0.75 U	2.5 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.23 U	2.5 U

**Notes:**

- 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).
- Values exceeding NYSDEC TOGS 1.1.1 AWQS are
- Method Detection Limits (MDLs) are elevated above
- µg/L: Micrograms per liter
- \* Monitoring well MW-S was destroyed during
- \*\* Monitoring wells MW-N and MW-S were destroyed

**Qualifiers:**

U - Indicates the minimum detection Limit (MDL) is reported. The concentration of the analyte is less than the

D<sup>x</sup> - Dillution factor of X

Table 2  
SVOC Exceedances in Groundwater Samples  
River Place II  
New York, New York  
Langan Project No. 170040901

		Park Area Northern Well									
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter**	1st Quarter 2010	2nd Quarter 2010	3rd Quarter 2010	4th Quarter 2010	YEAR 1 - 2011	YEAR 2 - 2012
SAMPLING DATE	NYSDEC TOGS 1.1.1	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
LANGAN SAMPLE ID	AWQS	MW-N-3-16-09	MW-N-6-17-09	MW-N-9-18-09	MW-N2-1-7-10	MW-N2-3-1-10	MW-N2-6-10-10	MW-N2-9-8-10	MW-N2-12-15-10	MW-N2-10-17-11	MW-N2-101712
LAB SAMPLE ID		L0903143-01	L0908040-01	L0913185-01	L1000282-01	L1003006-01	L1008735-02	L1013903-01	L1020042-01	L1116955-02	
Semi-Volatile Organics (µg/L)											
Westborough Lab											
2,4-Dimethylphenol	50	1800 D <sup>50</sup>	830 D <sup>5</sup>	1200 D <sup>100</sup>	270 D <sup>5</sup>	500 U, D <sup>50</sup>	29	160	10 U, D <sup>1</sup>	1.4 U	150
Acenaphthene	20	120 D <sup>20</sup>	95 D <sup>40</sup>	99 D <sup>50</sup>	61 D <sup>200</sup>	65 D <sup>50</sup>	17	97	170 D <sup>500</sup>	140	190
Benzo(a)pyrene	0	7.2 D <sup>20</sup>	8.2 U, D <sup>40</sup>	9.6 U, D <sup>50</sup>	40 U, D <sup>200</sup>	10 U, D <sup>50</sup>	5 U	80 U	100 U, D <sup>500</sup>	28 U	50 U
Benzo(b)fluoranthene	0.002	8.4 D <sup>20</sup>	8.2 U, D <sup>40</sup>	9.6 U, D <sup>50</sup>	40 U, D <sup>200</sup>	10 U, D <sup>50</sup>	7.2 D <sup>20</sup>	80 U	100 U, D <sup>500</sup>	28 U	50 U
Bis(2-Ethylhexyl)phthalate	5	24 U, D <sup>5</sup>	26 U, D <sup>5</sup>	46 D <sup>5</sup>	25 U, D <sup>5</sup>	250 U, D <sup>50</sup>	5 U	5 U	5 D <sup>1</sup>	1.4 U	3 U
Chrysene	0.002	4.1 D <sup>20</sup>	8.2 U, D <sup>40</sup>	9.6 U, D <sup>50</sup>	40 U, D <sup>200</sup>	10 U, D <sup>50</sup>	4200 R1, D <sup>400</sup>	80 U	100 U, D <sup>500</sup>	20 U	50 U
Fluorene	50	56 D <sup>20</sup>	59 D <sup>40</sup>	47 D <sup>50</sup>	40 U, D <sup>200</sup>	39 D <sup>50</sup>	7.2 D <sup>20</sup>	80 U	100 D <sup>500</sup>	58 J	67
Indeno(1,2,3-cd)Pyrene	---	NA	NA	NA	NA	10 U, D <sup>50</sup>	29 D <sup>20</sup>	NA	NA	32 U	50 U
Naphthalene	10	12000 D <sup>400</sup>	8900 D <sup>400</sup>	9400 D <sup>1000</sup>	2200 D <sup>200</sup>	2700 D <sup>50</sup>	8.9 D <sup>20</sup>	6900	9100 D <sup>500</sup>	6800	8400
Phenanthrene	50	100 D <sup>20</sup>	53 D <sup>40</sup>	62 D <sup>50</sup>	40 D <sup>200</sup>	52 D <sup>50</sup>	84 D <sup>20</sup>	80 U	100 D <sup>500</sup>	97	90
Phenol	1	120 D <sup>5</sup>	61 D <sup>5</sup>	87 D <sup>5</sup>	35 U, D <sup>5</sup>	350 U, D <sup>50</sup>	17	27	16 D <sup>1</sup>	0.26 U	5 U

**Notes:**

- 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).
- Values exceeding NYSDEC TOGS 1.1.1 AWQS are highlighted and BOLD.
- Method Detection Limits (MDLs) are elevated above TOGS criteria in the majority of the samples due to high levels of contamination.
- µg/L: Micrograms per liter
- \* Monitoring 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 - Indicates the minimum detection Limit (MDL) is reported. The concentration of the analyte is less than the MDL.

D<sup>x</sup> - Dillution factor of X

R1 - Analyte Results are from sample re-analysis

Table 2  
SVOC Exceedances in Groundwater Samples  
River Place II  
New York, New York  
Langan Project No. 170040901

		Park Area Southern Well*										Quality Control
		1st Quarter	1st Quarter	2nd Quarter	4th Quarter**	1st Quarter 2010	2nd Quarter 2010	3rd Quarter 2010	4th Quarter 2010	YEAR 1 - 2011	YEAR 2 - 2012	1st Quarter
SAMPLING DATE	NYSDEC TOGS 1.1.1	3/16/2009	3/16/2009	6/17/2009	1/7/2010	3/1/2010	6/10/2010	9/8/2010	12/15/2010	10/17/2011	10/17/2012	3/16/2009
LANGAN SAMPLE ID	AWQS	MW-S-3-16-09	DUP-3-16-09	MW-S-6-17-09	MW-S2-1-7-10	MW-S2-3-1-10	MW-S2-6-10-10	MW-S2-9-8-10	MW-S2-12-15-10	MW-S2-10-17-11	MW-S2-101712	FB-3-16-09
LAB SAMPLE ID		L0903143-02	L0903143-03	L0908040-02	L0908040-02	L1003006-02	L1008735-01	L1013903-02	L1020042-02	L1116955-01		L0903143-04
Semi-Volatile Organics (µg/L)			Duplicate of									
Westborough Lab			MW-N-3-16-09									
2,4-Dimethylphenol	50	10 U	1800 D <sup>25</sup>	10 U	10 U	500 U, D <sup>50</sup>	10 U	10 U	10 D <sup>50</sup>	1.2 U	5 U	9.6 U
Acenaphthene	20	14	160 D <sup>200</sup>	0.2 U	200 U, D <sup>1000</sup>	63 D <sup>50</sup>	7 U	41	63 D <sup>50</sup>	15	49	0.19 U
Benzo(a)pyrene	0	0.2 U	39 U, D <sup>5</sup>	0.2 U	200 U, D <sup>1000</sup>	15 D <sup>50</sup>	5 U	10 U	100 U, D <sup>50</sup>	4.0	5.4	0.19 U
Benzo(b)fluoranthene	0.002	0.2 U	39 U, D <sup>5</sup>	0.2 U	200 U, D <sup>1000</sup>	14 D <sup>50</sup>	4 D <sup>10</sup>	10 U	17 D <sup>50</sup>	2.9	3	0.19 U
Bis(2-Ethylhexyl)phthalate	5	5 U	24 U, D <sup>5</sup>	5.1 U	5 U	250 U, D <sup>50</sup>	5 U	5 U	5 U, D <sup>5</sup>	1.4 U	3 U	4.8 U
Chrysene	0.002	0.2 U	39 U, D <sup>5</sup>	0.2 U	200 U, D <sup>1000</sup>	10 U, D <sup>50</sup>	1600 D <sup>100</sup>	10 U	10 U, D <sup>5</sup>	3.2	5.3	0.19 U
Fluorene	50	8.9	80 D <sup>5</sup>	0.2 U	200 U, D <sup>1000</sup>	61 D <sup>50</sup>	4 D <sup>10</sup>	36	42 U, D <sup>5</sup>	13	33	0.19 U
Indeno(1,2,3-cd)Pyrene	---	NA	NA	NA	NA	10 U, D <sup>50</sup>	10 D <sup>10</sup>	NA	15 D <sup>50</sup>	1.8	3.3	NA
Naphthalene	10	300 D <sup>10</sup>	14000 D <sup>400</sup>	0.62	11000 D <sup>1000</sup>	1400 D <sup>100</sup>	4.8 D <sup>10</sup>	990	400 D <sup>50</sup>	9.3	90	0.34
Phenanthrene	50	11	150 D <sup>5</sup>	0.2 U	200 U, D <sup>1000</sup>	120 D <sup>50</sup>	74 D <sup>10</sup>	52	63 D <sup>50</sup>	16	32	0.19 U
Phenol	1	7 U	110 D <sup>5</sup>	7.2 U	7.7	350 U, D <sup>50</sup>	7 U	7 U	7 D <sup>50</sup>	0.26 U	5 U	6.7 U

**Notes:**

- 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).
- Values exceeding NYSDEC TOGS 1.1.1 AWQS are highlighted and BOLD.
- Method Detection Limits (MDLs) are elevated above TOGS criteria in the majority of the samples due to high levels of contamination.
- µg/L: Micrograms per liter
- \* Monitoring 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:**

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D<sup>x</sup> - Dillution factor of X

R1 - Analyte Results are from sample re-analysis



Table 3  
Total Metals and Cyanide Exceedances in Groundwater Samples  
River Place II  
New York, New York  
Langan Project No. 170040901

		Park Area Northern Well											
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter**	1st Quarter 2010	2nd Quarter 2010	3rd Quarter 2010	4th Quarter 2010	YEAR 1 - 2011	YEAR 2 - 2012		
LANGAN SAMPLE ID	NYSDEC TOGS 1.1.1 AWQS	MW-N-3-16-09	MW-N-6-17-09	MW-N-9/18/09	MW-N2-1-7-2010	MW-N2-3-1-2010	MW-N2-6-10-10	MW-N2-9-8-10	MW-N2-12-15-10	MW-N2-10-17-11	MW-N2-101712		
SAMPLING DATE		3/16/2009	6/17/2009	9/18/2009	1/7/2010	3/1/2010	6/10/2010	9/8/2010	12/15/2010	10/17/2011	10/17/2012		
LAB SAMPLE ID		L0903143-01	L0908040-01	L0913185-01	L1000282-01	L1000282-01	L1008735-02	L1013903-01	L1020042-01	L1116955-02			
Total Metals (µg/L)													
Wesborough Lab													
Iron, Total	300	5300	1900	1200	3500	4000	4800	2600	12000	3300	1270		
Lead, Total	25	15	10 U	10 U	10 U	10 U	10 U	10 U	67	3 U	2.4 J		
Magnesium, Total	35000	70000	70000	59000	83000	46000	46000	51000	86000	64000	42000		
Manganese, Total	300	1570	1570	1340	746	603	632	528	816	582	542.8		
Mercury, Total	0.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	ND	ND	0.3 U	0.1 U	0.2 U		
Sodium, Total	20000	300000 D <sup>5</sup>	270000	250000	240000	110000	160000	200000	240000	210000	127000		
Cyanide (ug/L) - Wesborough Lab													
Cyanide, Total	200	1100 D <sup>10</sup>	789 D <sup>5</sup>	799 D <sup>2</sup>	890 D <sup>10</sup>	1780 D <sup>10</sup>	1500 D <sup>5</sup>	1060 D <sup>10</sup>	1680 D <sup>10</sup>	612	126		

**Notes:**

- 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).
- Values exceeding NYSDEC TOGS 1.1.1 AWQS are highlighted and BOLD.
- Method Detection Limits (MDLs) are elevated above TOGS criteria in the majority of the samples due to high levels of contamination

- µg/L: Micrograms per liter

\* Monitoring 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 - Indicates the minimum detection Limit (MDL) is reported. The concentration of the analyte is less than the MDL.

D<sup>x</sup> - Dillution factor of X

R1 - Analytical Results are from sample re-analysis

Table 3  
Total Metals and Cyanide Exceedances in Groundwater Samples  
River Place II  
New York, New York  
Langan Project No. 170040901

		Park Area Southern Well*																Quality Control					
		1st Quarter		1st Quarter		2nd Quarter		4th Quarter**		1st Quarter 2010		2nd Quarter 2010		3rd Quarter 2010		4th Quarter 2010		YEAR 1 - 2011		YEAR 2 - 2012		1st Quarter	
LANGAN SAMPLE ID	NYSDEC TOGS 1.1.1 AWQS	MW-S-3-16-09		DUP-3-16-09		MW-S-6-17-09		MW-S2-1-7-2010		MW-N2-3-1-2010		MW-S2-6-10-10		MW-S2-9-8-10		MW-S2-12-15-10		MW-S2-10-17-11		MW-S2-101712		FB-3-16-09	
SAMPLING DATE		3/16/2009		3/16/2009		6/17/2009		1/7/2010		3/1/2010		6/10/2010		9/8/2010		12/15/2010		10/17/2011		10/17/2012		3/16/2009	
LAB SAMPLE ID		L0903143-02		L0903143-03		L0908040-02		L1000282-02		L1000282-01		L1008735-01		L1013903-02		L1020042-02		L1116955-02				L0903143-04	
Total Metals (µg/L)				Duplicate of	MW-																		
Wesborough Lab				N-3-16-09																			
Iron, Total	300	21000		2700		9200		3200		11000		5000		9800		12000		9900		12100		50	U
Lead, Total	25	158		10	U	45		17		117		29		86		166		42		108.7		10	U
Magnesium, Total	35000	71000		72000		48000		120000		87000		85000		93000		84000		68000		43800		100	U
Manganese, Total	300	598		1430		403		327		636		430		492		558		537		574.9		10	U
Mercury, Total	0.7	0.5		0.2	U	0.2	U	0.3		0.6		0.0002		0.00005		0.9		0.1	U	0.8		0.2	U
Sodium, Total	20000	96000		320000	D <sup>b</sup>	100000		98000		89000		68000		76000		67000		42000		32600		2000	U
Cyanide (ug/L) - Wesborough Lab																							
Cyanide, Total	200	1920	D <sup>10</sup>	1090	D <sup>10</sup>	1920	D <sup>5</sup>	1090	D <sup>10</sup>	973	D <sup>5</sup>	1110	D <sup>5</sup>	1540	D <sup>10</sup>	1410	D <sup>10</sup>	798		152		5	U, D <sup>5</sup>

**Notes:**

- 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).
- Values exceeding NYSDEC TOGS 1.1.1 AWQS are highlighted and BOLD.
- Method Detection Limits (MDLs) are elevated above TOGS criteria in the majority of the samples due to high levels of contamination

- µg/L: Micrograms per liter

\* Monitoring 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 - Indicates the minimum detection Limit (MDL) is reported. The concentration of the analyte is less than the MDL.

D<sup>x</sup> - Dillution factor of X

R1 - Analytical Results are from sample re-analysis

**ATTACHMENT A**  
**GROUNDWATER SAMPLING FORMS**

## GROUND WATER SAMPLE FIELD INFORMATION FORM

<b>Site:</b>	Riverplace I and II	<b>Well#/Location:</b>	MW-S2	<b>Job No.</b>	170040901
<b>Date:</b>	10/17/2012	<b>Weather:</b>	Low 60s - Sunny	<b>Sampling Personnel:</b>	N.Rochna

Well Information	
Sample ID	MW-S2-101712
Well Depth (ft)	19.45
Screened Interval (ft)	---
Casing Elevation (msl)	---
Casing Diameter (in)	2
Depth to Water (ft)	8.83
Water Elevation (msl)	---
Casing Volume (gal)	1.73
PID/FID Reading (ppm)	---

Purging Information	
Purging Method	Wattera Pump
Purging Rate (gpm)	0.08
Start Purge Time	11:25
End Purge Time	13:00
Volume Purged (gal)	8

Sampling Information	
Sampling Method	Wettera Pump
Start Sampling Time	13:00
End Sampling Time	13:20
Depth Before Sampling (ft)	10.12
Number Bottles Collected	8

Parameters									
Sample Time	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	ORP (mV)	Depth to Water (ft)	Purged Volume (gallons)	Notes
9:45	***Start Purging Well***								
9:55	7.74	1.71	>800						
10:05	7.67	1.72	459.0						
10:15	7.68	1.77	>800						
10:25	7.67	1.77	>800						
10:35	7.65	1.77	381.0						
10:45	7.64	1.77	281.0						
10:55	7.64	1.76	243.0						
11:05	7.59	1.77	235.0						
11:15	7.61	1.77	258.0						
11:25	7.55	1.77	246.0						
11:35	7.69	1.74	218.0						
11:45	7.68	1.73	198.0						
11:55	7.67	1.76	180.0						
***Collect Sample***									

### Notes/Remarks

\* After two hours of purging the monitoring well, the turbidity did not drop below 50 NTUs.



**Langan** Engineering and Environmental Services

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# GROUND WATER SAMPLE FIELD INFORMATION FORM

<b>Site:</b>	Riverplace I and II	<b>Well#/Location:</b>	MW-N2	<b>Job No.</b>	170040901
<b>Date:</b>	10/17/2012	<b>Weather:</b>	Low 60s - Sunny	<b>Sampling Personnel:</b>	N.Rochna

Well Information	
Sample ID	MW-N2-101712
Well Depth (ft)	19.45
Screened Interval (ft)	---
Casing Elevation (msl)	---
Casing Diameter (in)	2
Depth to Water (ft)	9.84
Water Elevation (msl)	---
Casing Volume (gal)	1.57
PID/FID Reading (ppm)	---

Purging Information	
Purging Method	Wattera Pump
Purging Rate (gpm)	0.12
Start Purge Time	1:10 PM
End Purge Time	2:30 PM
Volume Purged (gal)	9.75

Sampling Information	
Sampling Method	Wettera Pump
Start Sampling Time	2:25 PM
End Sampling Time	2:35 PM
Depth Before Sampling (ft)	10.76
Number Bottles Collected	8

[illegible]

Notes/Remarks	
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**ATTACHMENT B**  
**LABORATORY ANALYTICAL REPORTS, CHAIN-OF-  
CUSTODY AND CERTIFICATIONS**



## ANALYTICAL REPORT

Lab Number:	L1218727
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Jason Hayes
Phone:	(212) 479-5427
Project Name:	RIVER PLACE
Project Number:	170040901
Report Date:	10/24/12

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.

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



**Project Name:** RIVER PLACE  
**Project Number:** 170040901

**Lab Number:** L1218727  
**Report Date:** 10/24/12

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1218727-01	MW-S2-101712	W. 42ND, NY, NY	10/17/12 11:45
L1218727-02	MW-N2-101712	W. 42ND, NY, NY	10/17/12 14:25
L1218727-03	TRIP BLANK	W. 42ND, NY, NY	10/17/12 00:00



**Project Name:** RIVER PLACE  
**Project Number:** 170040901

**Lab Number:** L1218727  
**Report Date:** 10/24/12

### Case Narrative

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

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

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

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

#### HOLD POLICY

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

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

**Project Name:** RIVER PLACE  
**Project Number:** 170040901

**Lab Number:** L1218727  
**Report Date:** 10/24/12

### 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.

#### Volatile Organics

L1218727-02 has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

#### Semivolatile Organics by SIM

The surrogate recoveries for L1218727-02 are below the acceptance criteria for 2-Fluorophenol, Phenol-d6, Nitrobenzene-d5, 2-Fluorobiphenyl, 2,4,6-Tribromophenol, and 4-Terphenyl-d14 (all 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

L1218727-01 and -02 have elevated detection limits for all elements, except Mercury, due to the dilutions required by matrix interferences encountered during analysis.

#### Cyanide, Physiologically Available

The Method Blank, associated with L1218727-01 and -02, has a concentration above the reporting limit. Since the associated sample concentrations are greater than 10x the blank concentration, no corrective action was required.

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

Authorized Signature:



Kelly Stenstrom

Title: Technical Director/Representative

Date: 10/24/12

# ORGANICS

# **VOLATILES**

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

Lab ID: L1218727-01 D2  
 Client ID: MW-S2-101712  
 Sample Location: W. 42ND, NY, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 10/21/12 19:56  
 Analyst: PD

Date Collected: 10/17/12 11:45  
 Date Received: 10/17/12  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Ethylbenzene	260		ug/l	25	7.0	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	100		70-130

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

**Lab ID:** L1218727-01      D  
**Client ID:** MW-S2-101712  
**Sample Location:** W. 42ND, NY, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 10/20/12 22:52  
**Analyst:** PD

**Date Collected:** 10/17/12 11:45  
**Date Received:** 10/17/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethane	ND		ug/l	6.2	1.8	2.5
Chloroform	ND		ug/l	6.2	1.8	2.5
Carbon tetrachloride	ND		ug/l	1.2	0.41	2.5
1,2-Dichloropropane	ND		ug/l	2.5	0.74	2.5
Dibromochloromethane	ND		ug/l	1.2	0.47	2.5
1,1,2-Trichloroethane	ND		ug/l	3.8	1.2	2.5
Tetrachloroethene	ND		ug/l	1.2	0.45	2.5
Chlorobenzene	ND		ug/l	6.2	1.8	2.5
Trichlorofluoromethane	ND		ug/l	6.2	1.8	2.5
1,2-Dichloroethane	ND		ug/l	1.2	0.40	2.5
1,1,1-Trichloroethane	ND		ug/l	6.2	1.8	2.5
Bromodichloromethane	ND		ug/l	1.2	0.48	2.5
trans-1,3-Dichloropropene	ND		ug/l	1.2	0.41	2.5
cis-1,3-Dichloropropene	ND		ug/l	1.2	0.36	2.5
1,1-Dichloropropene	ND		ug/l	6.2	1.8	2.5
Bromoform	ND		ug/l	5.0	1.6	2.5
1,1,2,2-Tetrachloroethane	ND		ug/l	1.2	0.48	2.5
Benzene	94		ug/l	1.2	0.48	2.5
Toluene	4.2	J	ug/l	6.2	1.8	2.5
Ethylbenzene	300	E	ug/l	6.2	1.8	2.5
Chloromethane	ND		ug/l	6.2	1.8	2.5
Bromomethane	ND		ug/l	6.2	1.8	2.5
Vinyl chloride	ND		ug/l	2.5	0.82	2.5
Chloroethane	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethene	ND		ug/l	1.2	0.45	2.5
trans-1,2-Dichloroethene	ND		ug/l	6.2	1.8	2.5
Trichloroethene	ND		ug/l	1.2	0.44	2.5
1,2-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,4-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

Lab ID: L1218727-01 D

Date Collected: 10/17/12 11:45

Client ID: MW-S2-101712

Date Received: 10/17/12

Sample Location: W. 42ND, NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/l	6.2	1.8	2.5
p/m-Xylene	9.2		ug/l	6.2	1.8	2.5
o-Xylene	20		ug/l	6.2	1.8	2.5
cis-1,2-Dichloroethene	ND		ug/l	6.2	1.8	2.5
Dibromomethane	ND		ug/l	12	2.5	2.5
1,2,3-Trichloropropane	ND		ug/l	6.2	1.8	2.5
Acrylonitrile	ND		ug/l	12	3.8	2.5
Styrene	ND		ug/l	6.2	1.8	2.5
Dichlorodifluoromethane	ND		ug/l	12	2.5	2.5
Acetone	4.8	J	ug/l	12	2.5	2.5
Carbon disulfide	ND		ug/l	12	2.5	2.5
2-Butanone	ND		ug/l	12	2.5	2.5
Vinyl acetate	ND		ug/l	12	2.5	2.5
4-Methyl-2-pentanone	ND		ug/l	12	2.5	2.5
2-Hexanone	ND		ug/l	12	2.5	2.5
Bromochloromethane	ND		ug/l	6.2	1.8	2.5
2,2-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,2-Dibromoethane	ND		ug/l	5.0	1.6	2.5
1,3-Dichloropropane	ND		ug/l	6.2	1.8	2.5
1,1,1,2-Tetrachloroethane	ND		ug/l	6.2	1.8	2.5
Bromobenzene	ND		ug/l	6.2	1.8	2.5
n-Butylbenzene	ND		ug/l	6.2	1.8	2.5
sec-Butylbenzene	ND		ug/l	6.2	1.8	2.5
tert-Butylbenzene	ND		ug/l	6.2	1.8	2.5
o-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
p-Chlorotoluene	ND		ug/l	6.2	1.8	2.5
1,2-Dibromo-3-chloropropane	ND		ug/l	6.2	1.8	2.5
Hexachlorobutadiene	ND		ug/l	6.2	1.8	2.5
Isopropylbenzene	55		ug/l	6.2	1.8	2.5
p-Isopropyltoluene	ND		ug/l	6.2	1.8	2.5
Naphthalene	150		ug/l	6.2	1.8	2.5
n-Propylbenzene	34		ug/l	6.2	1.8	2.5
1,2,3-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3,5-Trimethylbenzene	3.0	J	ug/l	6.2	1.8	2.5
1,2,4-Trimethylbenzene	79		ug/l	6.2	1.8	2.5
1,4-Dioxane	ND		ug/l	620	190	2.5
1,4-Diethylbenzene	ND		ug/l	5.0	1.8	2.5
4-Ethyltoluene	13		ug/l	5.0	1.8	2.5

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

Lab ID: L1218727-01 D

Date Collected: 10/17/12 11:45

Client ID: MW-S2-101712

Date Received: 10/17/12

Sample Location: W. 42ND, NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## Volatile Organics by GC/MS - Westborough Lab

1,2,4,5-Tetramethylbenzene	9.2		ug/l	5.0	1.6	2.5
Ethyl ether	ND		ug/l	6.2	1.8	2.5
trans-1,4-Dichloro-2-butene	ND		ug/l	6.2	1.8	2.5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	106		70-130



**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

**Lab ID:** L1218727-02      D  
**Client ID:** MW-N2-101712  
**Sample Location:** W. 42ND, NY, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 10/20/12 23:17  
**Analyst:** PD

**Date Collected:** 10/17/12 14:25  
**Date Received:** 10/17/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	620	180	250
1,1-Dichloroethane	ND		ug/l	620	180	250
Chloroform	ND		ug/l	620	180	250
Carbon tetrachloride	ND		ug/l	120	41.	250
1,2-Dichloropropane	ND		ug/l	250	74.	250
Dibromochloromethane	ND		ug/l	120	47.	250
1,1,2-Trichloroethane	ND		ug/l	380	120	250
Tetrachloroethene	ND		ug/l	120	45.	250
Chlorobenzene	ND		ug/l	620	180	250
Trichlorofluoromethane	ND		ug/l	620	180	250
1,2-Dichloroethane	ND		ug/l	120	40.	250
1,1,1-Trichloroethane	ND		ug/l	620	180	250
Bromodichloromethane	ND		ug/l	120	48.	250
trans-1,3-Dichloropropene	ND		ug/l	120	41.	250
cis-1,3-Dichloropropene	ND		ug/l	120	36.	250
1,1-Dichloropropene	ND		ug/l	620	180	250
Bromoform	ND		ug/l	500	160	250
1,1,2,2-Tetrachloroethane	ND		ug/l	120	48.	250
Benzene	1600		ug/l	120	48.	250
Toluene	240	J	ug/l	620	180	250
Ethylbenzene	580	J	ug/l	620	180	250
Chloromethane	ND		ug/l	620	180	250
Bromomethane	ND		ug/l	620	180	250
Vinyl chloride	ND		ug/l	250	82.	250
Chloroethane	ND		ug/l	620	180	250
1,1-Dichloroethene	ND		ug/l	120	45.	250
trans-1,2-Dichloroethene	ND		ug/l	620	180	250
Trichloroethene	ND		ug/l	120	44.	250
1,2-Dichlorobenzene	ND		ug/l	620	180	250
1,3-Dichlorobenzene	ND		ug/l	620	180	250
1,4-Dichlorobenzene	ND		ug/l	620	180	250

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

Lab ID: L1218727-02 D

Date Collected: 10/17/12 14:25

Client ID: MW-N2-101712

Date Received: 10/17/12

Sample Location: W. 42ND, NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/l	620	180	250
p/m-Xylene	760		ug/l	620	180	250
o-Xylene	470	J	ug/l	620	180	250
cis-1,2-Dichloroethene	ND		ug/l	620	180	250
Dibromomethane	ND		ug/l	1200	250	250
1,2,3-Trichloropropane	ND		ug/l	620	180	250
Acrylonitrile	ND		ug/l	1200	380	250
Styrene	ND		ug/l	620	180	250
Dichlorodifluoromethane	ND		ug/l	1200	250	250
Acetone	ND		ug/l	1200	250	250
Carbon disulfide	ND		ug/l	1200	250	250
2-Butanone	ND		ug/l	1200	250	250
Vinyl acetate	ND		ug/l	1200	250	250
4-Methyl-2-pentanone	ND		ug/l	1200	250	250
2-Hexanone	ND		ug/l	1200	250	250
Bromochloromethane	ND		ug/l	620	180	250
2,2-Dichloropropane	ND		ug/l	620	180	250
1,2-Dibromoethane	ND		ug/l	500	160	250
1,3-Dichloropropane	ND		ug/l	620	180	250
1,1,1,2-Tetrachloroethane	ND		ug/l	620	180	250
Bromobenzene	ND		ug/l	620	180	250
n-Butylbenzene	ND		ug/l	620	180	250
sec-Butylbenzene	ND		ug/l	620	180	250
tert-Butylbenzene	ND		ug/l	620	180	250
o-Chlorotoluene	ND		ug/l	620	180	250
p-Chlorotoluene	ND		ug/l	620	180	250
1,2-Dibromo-3-chloropropane	ND		ug/l	620	180	250
Hexachlorobutadiene	ND		ug/l	620	180	250
Isopropylbenzene	ND		ug/l	620	180	250
p-Isopropyltoluene	ND		ug/l	620	180	250
Naphthalene	9200		ug/l	620	180	250
n-Propylbenzene	ND		ug/l	620	180	250
1,2,3-Trichlorobenzene	ND		ug/l	620	180	250
1,2,4-Trichlorobenzene	ND		ug/l	620	180	250
1,3,5-Trimethylbenzene	ND		ug/l	620	180	250
1,2,4-Trimethylbenzene	240	J	ug/l	620	180	250
1,4-Dioxane	ND		ug/l	62000	19000	250
1,4-Diethylbenzene	ND		ug/l	500	180	250
4-Ethyltoluene	180	J	ug/l	500	180	250

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

Lab ID: L1218727-02 D

Date Collected: 10/17/12 14:25

Client ID: MW-N2-101712

Date Received: 10/17/12

Sample Location: W. 42ND, NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## Volatile Organics by GC/MS - Westborough Lab

1,2,4,5-Tetramethylbenzene	ND		ug/l	500	160	250
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Ethyl ether	ND		ug/l	620	180	250
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trans-1,4-Dichloro-2-butene	ND		ug/l	620	180	250
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	105		70-130

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

**Lab ID:** L1218727-03  
**Client ID:** TRIP BLANK  
**Sample Location:** W. 42ND, NY, NY  
**Matrix:** Water  
**Analytical Method:** 1,8260C  
**Analytical Date:** 10/20/12 15:41  
**Analyst:** PD

**Date Collected:** 10/17/12 00:00  
**Date Received:** 10/17/12  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.16	1
1,2-Dichloropropane	ND		ug/l	1.0	0.30	1
Dibromochloromethane	ND		ug/l	0.50	0.19	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	0.16	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
1,1-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	0.19	1
Benzene	ND		ug/l	0.50	0.19	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.18	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.17	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

Lab ID: L1218727-03  
 Client ID: TRIP BLANK  
 Sample Location: W. 42ND, NY, NY

Date Collected: 10/17/12 00:00  
 Date Received: 10/17/12  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	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	1.0	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.0	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	76.	1
1,4-Diethylbenzene	ND		ug/l	2.0	0.70	1
4-Ethyltoluene	ND		ug/l	2.0	0.70	1

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

Lab ID: L1218727-03  
 Client ID: TRIP BLANK  
 Sample Location: W. 42ND, NY, NY

Date Collected: 10/17/12 00:00  
 Date Received: 10/17/12  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## Volatile Organics by GC/MS - Westborough Lab

1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	107		70-130



Project Name: RIVER PLACE

Lab Number: L1218727

Project Number: 170040901

Report Date: 10/24/12

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 10/20/12 14:50  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG568515-3					
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
Carbon tetrachloride	ND		ug/l	0.50	0.16
1,2-Dichloropropane	ND		ug/l	1.0	0.30
Dibromochloromethane	ND		ug/l	0.50	0.19
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	0.16
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
1,1-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	0.19
Benzene	ND		ug/l	0.50	0.19
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	0.18
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.17
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



Project Name: RIVER PLACE

Lab Number: L1218727

Project Number: 170040901

Report Date: 10/24/12

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 10/20/12 14:50  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG568515-3					
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
cis-1,2-Dichloroethene	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
tert-Butyl Alcohol	1.1	J	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	1.0
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.0
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
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

Project Name: RIVER PLACE

Lab Number: L1218727

Project Number: 170040901

Report Date: 10/24/12

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C

Analytical Date: 10/20/12 14:50

Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG568515-3					
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	76.
1,4-Diethylbenzene	ND		ug/l	2.0	0.70
4-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	103		70-130

Project Name: RIVER PLACE

Lab Number: L1218727

Project Number: 170040901

Report Date: 10/24/12

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 10/21/12 15:56  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG568515-9					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.16
1,2-Dichloropropane	ND		ug/l	1.0	0.30
Dibromochloromethane	ND		ug/l	0.50	0.19
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	0.16
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
1,1-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	0.19
Benzene	ND		ug/l	0.50	0.19
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	0.18
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.17
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

Project Name: RIVER PLACE

Lab Number: L1218727

Project Number: 170040901

Report Date: 10/24/12

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C

Analytical Date: 10/21/12 15:56

Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG568515-9					
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
cis-1,2-Dichloroethene	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
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	1.0
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.0
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
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

Project Name: RIVER PLACE

Lab Number: L1218727

Project Number: 170040901

Report Date: 10/24/12

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C

Analytical Date: 10/21/12 15:56

Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG568515-9					
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	76.
1,4-Diethylbenzene	ND		ug/l	2.0	0.70
4-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	104		70-130



# Lab Control Sample Analysis

## Batch Quality Control

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG568515-1 WG568515-2								
Methylene chloride	97		92		70-130	5		20
1,1-Dichloroethane	96		96		70-130	0		20
Chloroform	104		102		70-130	2		20
Carbon tetrachloride	102		100		63-132	2		20
1,2-Dichloropropane	93		89		70-130	4		20
Dibromochloromethane	105		99		63-130	6		20
1,1,2-Trichloroethane	95		95		70-130	0		20
Tetrachloroethene	109		104		70-130	5		20
Chlorobenzene	107		100		75-130	7		20
Trichlorofluoromethane	94		98		62-150	4		20
1,2-Dichloroethane	102		100		70-130	2		20
1,1,1-Trichloroethane	104		102		67-130	2		20
Bromodichloromethane	100		99		67-130	1		20
trans-1,3-Dichloropropene	98		90		70-130	9		20
cis-1,3-Dichloropropene	96		91		70-130	5		20
1,1-Dichloropropene	100		99		70-130	1		20
Bromoform	102		100		54-136	2		20
1,1,2,2-Tetrachloroethane	96		90		67-130	6		20
Benzene	99		96		70-130	3		20
Toluene	107		99		70-130	8		20
Ethylbenzene	106		102		70-130	4		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG568515-1 WG568515-2								
Chloromethane	102		99		64-130	3		20
Bromomethane	117		125		39-139	7		20
Vinyl chloride	85		85		55-140	0		20
Chloroethane	84		83		55-138	1		20
1,1-Dichloroethene	96		97		61-145	1		20
trans-1,2-Dichloroethene	98		97		70-130	1		20
Trichloroethene	101		99		70-130	2		20
1,2-Dichlorobenzene	101		98		70-130	3		20
1,3-Dichlorobenzene	104		101		70-130	3		20
1,4-Dichlorobenzene	103		100		70-130	3		20
Methyl tert butyl ether	94		89		63-130	5		20
p/m-Xylene	106		102		70-130	4		20
o-Xylene	106		103		70-130	3		20
cis-1,2-Dichloroethene	104		100		70-130	4		20
Dibromomethane	100		94		70-130	6		20
1,2,3-Trichloropropane	100		98		64-130	2		20
Acrylonitrile	88		84		70-130	5		20
tert-Butyl Alcohol	91		86		70-130	6		20
Styrene	107		104		70-130	3		20
Dichlorodifluoromethane	72		72		36-147	0		20
Acetone	93		87		58-148	7		20

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG568515-1 WG568515-2								
Carbon disulfide	89		86		51-130	3		20
2-Butanone	83		81		63-138	2		20
Vinyl acetate	78		75		70-130	4		20
4-Methyl-2-pentanone	86		81		59-130	6		20
2-Hexanone	87		76		57-130	13		20
Bromochloromethane	101		97		70-130	4		20
2,2-Dichloropropane	98		99		63-133	1		20
1,2-Dibromoethane	99		93		70-130	6		20
1,3-Dichloropropane	102		94		70-130	8		20
1,1,1,2-Tetrachloroethane	107		103		64-130	4		20
Bromobenzene	105		103		70-130	2		20
n-Butylbenzene	101		98		53-136	3		20
sec-Butylbenzene	103		102		70-130	1		20
tert-Butylbenzene	105		104		70-130	1		20
o-Chlorotoluene	103		101		70-130	2		20
p-Chlorotoluene	105		103		70-130	2		20
1,2-Dibromo-3-chloropropane	97		99		41-144	2		20
Hexachlorobutadiene	103		104		63-130	1		20
Isopropylbenzene	105		102		70-130	3		20
p-Isopropyltoluene	104		104		70-130	0		20
Naphthalene	89		82		70-130	8		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG568515-1 WG568515-2								
n-Propylbenzene	104		101		69-130	3		20
1,2,3-Trichlorobenzene	96		91		70-130	5		20
1,2,4-Trichlorobenzene	96		94		70-130	2		20
1,3,5-Trimethylbenzene	105		104		64-130	1		20
1,2,4-Trimethylbenzene	106		104		70-130	2		20
1,4-Dioxane	82		75		56-162	9		20
1,4-Diethylbenzene	102		100		70-130	2		20
4-Ethyltoluene	104		102		70-130	2		20
1,2,4,5-Tetramethylbenzene	97		95		70-130	2		20
Ethyl ether	93		88		59-134	6		20
trans-1,4-Dichloro-2-butene	77		75		70-130	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102		101		70-130
Toluene-d8	106		103		70-130
4-Bromofluorobenzene	101		103		70-130
Dibromofluoromethane	100		104		70-130

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** RIVER PLACE

**Project Number:** 170040901

**Lab Number:** L1218727

**Report Date:** 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG568515-7 WG568515-8								
Methylene chloride	92		90		70-130	2		20
1,1-Dichloroethane	90		90		70-130	0		20
Chloroform	99		96		70-130	3		20
Carbon tetrachloride	93		93		63-132	0		20
1,2-Dichloropropane	90		90		70-130	0		20
Dibromochloromethane	96		100		63-130	4		20
1,1,2-Trichloroethane	89		92		70-130	3		20
Tetrachloroethene	103		101		70-130	2		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	90		88		62-150	2		20
1,2-Dichloroethane	94		95		70-130	1		20
1,1,1-Trichloroethane	94		94		67-130	0		20
Bromodichloromethane	95		91		67-130	4		20
trans-1,3-Dichloropropene	101		96		70-130	5		20
cis-1,3-Dichloropropene	97		93		70-130	4		20
1,1-Dichloropropene	95		94		70-130	1		20
Bromoform	94		96		54-136	2		20
1,1,2,2-Tetrachloroethane	92		93		67-130	1		20
Benzene	95		93		70-130	2		20
Toluene	100		97		70-130	3		20
Ethylbenzene	101		100		70-130	1		20

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG568515-7 WG568515-8								
Chloromethane	92		86		64-130	7		20
Bromomethane	120		121		39-139	1		20
Vinyl chloride	82		80		55-140	2		20
Chloroethane	85		83		55-138	2		20
1,1-Dichloroethene	91		88		61-145	3		20
trans-1,2-Dichloroethene	95		92		70-130	3		20
Trichloroethene	95		93		70-130	2		20
1,2-Dichlorobenzene	101		97		70-130	4		20
1,3-Dichlorobenzene	101		100		70-130	1		20
1,4-Dichlorobenzene	100		99		70-130	1		20
Methyl tert butyl ether	91		91		63-130	0		20
p/m-Xylene	102		100		70-130	2		20
o-Xylene	103		101		70-130	2		20
cis-1,2-Dichloroethene	96		95		70-130	1		20
Dibromomethane	96		93		70-130	3		20
1,2,3-Trichloropropane	90		100		64-130	11		20
Acrylonitrile	88		86		70-130	2		20
tert-Butyl Alcohol	80		84		70-130	5		20
Styrene	104		100		70-130	4		20
Dichlorodifluoromethane	68		67		36-147	1		20
Acetone	139		86		58-148	47	Q	20

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG568515-7 WG568515-8								
Carbon disulfide	93		85		51-130	9		20
2-Butanone	87		89		63-138	2		20
Vinyl acetate	96		92		70-130	4		20
4-Methyl-2-pentanone	85		84		59-130	1		20
2-Hexanone	82		90		57-130	9		20
Bromochloromethane	99		96		70-130	3		20
2,2-Dichloropropane	98		95		63-133	3		20
1,2-Dibromoethane	98		97		70-130	1		20
1,3-Dichloropropane	96		94		70-130	2		20
1,1,1,2-Tetrachloroethane	102		101		64-130	1		20
Bromobenzene	102		103		70-130	1		20
n-Butylbenzene	103		100		53-136	3		20
sec-Butylbenzene	102		101		70-130	1		20
tert-Butylbenzene	102		103		70-130	1		20
o-Chlorotoluene	101		99		70-130	2		20
p-Chlorotoluene	103		102		70-130	1		20
1,2-Dibromo-3-chloropropane	100		97		41-144	3		20
Hexachlorobutadiene	106		105		63-130	1		20
Isopropylbenzene	101		102		70-130	1		20
p-Isopropyltoluene	105		103		70-130	2		20
Naphthalene	102		91		70-130	11		20



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG568515-7 WG568515-8								
n-Propylbenzene	101		101		69-130	0		20
1,2,3-Trichlorobenzene	102		94		70-130	8		20
1,2,4-Trichlorobenzene	102		98		70-130	4		20
1,3,5-Trimethylbenzene	103		101		64-130	2		20
1,2,4-Trimethylbenzene	104		104		70-130	0		20
1,4-Dioxane	73		87		56-162	18		20
1,4-Diethylbenzene	104		102		70-130	2		20
4-Ethyltoluene	102		101		70-130	1		20
1,2,4,5-Tetramethylbenzene	102		98		70-130	4		20
Ethyl ether	84		87		59-134	4		20
trans-1,4-Dichloro-2-butene	90		80		70-130	12		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		98		70-130
Toluene-d8	105		104		70-130
4-Bromofluorobenzene	102		102		70-130
Dibromofluoromethane	101		101		70-130

# SEMIVOLATILES

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

**Lab ID:** L1218727-01  
**Client ID:** MW-S2-101712  
**Sample Location:** W. 42ND, NY, NY  
**Matrix:** Water  
**Analytical Method:** 1,8270D  
**Analytical Date:** 10/22/12 19:02  
**Analyst:** RC

**Date Collected:** 10/17/12 11:45  
**Date Received:** 10/17/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 10/18/12 23:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.67	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.55	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.55	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.55	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.85	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.45	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.46	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.61	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.67	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.50	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.40	1
Hexachlorocyclopentadiene	ND		ug/l	20	2.1	1
Isophorone	ND		ug/l	5.0	0.35	1
Nitrobenzene	ND		ug/l	2.0	0.50	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.70	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.39	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Butyl benzyl phthalate	ND		ug/l	5.0	0.46	1
Di-n-butylphthalate	ND		ug/l	5.0	0.54	1
Di-n-octylphthalate	ND		ug/l	5.0	0.53	1
Diethyl phthalate	ND		ug/l	5.0	0.45	1
Dimethyl phthalate	ND		ug/l	5.0	0.45	1
Biphenyl	26		ug/l	2.0	0.50	1
4-Chloroaniline	ND		ug/l	5.0	0.83	1
2-Nitroaniline	ND		ug/l	5.0	0.40	1
3-Nitroaniline	ND		ug/l	5.0	0.59	1
4-Nitroaniline	ND		ug/l	5.0	0.55	1
Dibenzofuran	15		ug/l	2.0	0.47	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.65	1
Acetophenone	ND		ug/l	5.0	0.55	1

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

Lab ID: L1218727-01  
 Client ID: MW-S2-101712  
 Sample Location: W. 42ND, NY, NY

Date Collected: 10/17/12 11:45  
 Date Received: 10/17/12  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.45	1
P-Chloro-M-Cresol	ND		ug/l	2.0	0.50	1
2-Chlorophenol	ND		ug/l	2.0	0.34	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.43	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.2	1
2-Nitrophenol	ND		ug/l	10	0.48	1
4-Nitrophenol	ND		ug/l	10	1.2	1
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	0.59	1
Phenol	ND		ug/l	5.0	0.26	1
2-Methylphenol	ND		ug/l	5.0	0.53	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.47	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.45	1
Benzoic Acid	ND		ug/l	50	1.0	1
Benzyl Alcohol	ND		ug/l	2.0	0.47	1
Carbazole	30		ug/l	2.0	0.53	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	73		21-120
Phenol-d6	49		10-120
Nitrobenzene-d5	98		23-120
2-Fluorobiphenyl	105		15-120
2,4,6-Tribromophenol	154	Q	10-120
4-Terphenyl-d14	128		41-149

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

**Lab ID:** L1218727-01      **D**  
**Client ID:** MW-S2-101712  
**Sample Location:** W. 42ND, NY, NY  
**Matrix:** Water  
**Analytical Method:** 1,8270D-SIM  
**Analytical Date:** 10/23/12 23:34  
**Analyst:** AS

**Date Collected:** 10/17/12 11:45  
**Date Received:** 10/17/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 10/18/12 23:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	49		ug/l	1.0	0.32	5
2-Chloronaphthalene	ND		ug/l	1.0	0.33	5
Fluoranthene	16		ug/l	1.0	0.22	5
Hexachlorobutadiene	ND		ug/l	2.5	0.36	5
Naphthalene	90		ug/l	1.0	0.32	5
Benzo(a)anthracene	6.3		ug/l	1.0	0.28	5
Benzo(a)pyrene	5.4		ug/l	1.0	0.34	5
Benzo(b)fluoranthene	3.0		ug/l	1.0	0.36	5
Benzo(k)fluoranthene	3.2		ug/l	1.0	0.34	5
Chrysene	5.3		ug/l	1.0	0.24	5
Acenaphthylene	5.9		ug/l	1.0	0.25	5
Anthracene	11		ug/l	1.0	0.32	5
Benzo(ghi)perylene	3.2		ug/l	1.0	0.35	5
Fluorene	33		ug/l	1.0	0.28	5
Phenanthrene	32		ug/l	1.0	0.32	5
Dibenzo(a,h)anthracene	1.1		ug/l	1.0	0.36	5
Indeno(1,2,3-cd)Pyrene	3.3		ug/l	1.0	0.40	5
Pyrene	23		ug/l	1.0	0.28	5
2-Methylnaphthalene	7.8		ug/l	1.0	0.30	5
Pentachlorophenol	ND		ug/l	4.0	0.94	5
Hexachlorobenzene	ND		ug/l	4.0	0.07	5
Hexachloroethane	ND		ug/l	4.0	0.32	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		21-120
Phenol-d6	43		10-120
Nitrobenzene-d5	94		23-120
2-Fluorobiphenyl	99		15-120
2,4,6-Tribromophenol	119		10-120
4-Terphenyl-d14	108		41-149

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

**Lab ID:** L1218727-02  
**Client ID:** MW-N2-101712  
**Sample Location:** W. 42ND, NY, NY  
**Matrix:** Water  
**Analytical Method:** 1,8270D  
**Analytical Date:** 10/22/12 19:29  
**Analyst:** RC

**Date Collected:** 10/17/12 14:25  
**Date Received:** 10/17/12  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 10/18/12 23:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.67	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.55	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.55	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.55	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.85	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.45	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.46	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.61	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.67	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.50	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.40	1
Hexachlorocyclopentadiene	ND		ug/l	20	2.1	1
Isophorone	ND		ug/l	5.0	0.35	1
Nitrobenzene	ND		ug/l	2.0	0.50	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.70	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.39	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Butyl benzyl phthalate	ND		ug/l	5.0	0.46	1
Di-n-butylphthalate	ND		ug/l	5.0	0.54	1
Di-n-octylphthalate	ND		ug/l	5.0	0.53	1
Diethyl phthalate	ND		ug/l	5.0	0.45	1
Dimethyl phthalate	ND		ug/l	5.0	0.45	1
Biphenyl	47		ug/l	2.0	0.50	1
4-Chloroaniline	ND		ug/l	5.0	0.83	1
2-Nitroaniline	ND		ug/l	5.0	0.40	1
3-Nitroaniline	ND		ug/l	5.0	0.59	1
4-Nitroaniline	ND		ug/l	5.0	0.55	1
Dibenzofuran	78		ug/l	2.0	0.47	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.65	1
Acetophenone	ND		ug/l	5.0	0.55	1

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

Lab ID: L1218727-02  
 Client ID: MW-N2-101712  
 Sample Location: W. 42ND, NY, NY

Date Collected: 10/17/12 14:25  
 Date Received: 10/17/12  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.45	1
P-Chloro-M-Cresol	ND		ug/l	2.0	0.50	1
2-Chlorophenol	ND		ug/l	2.0	0.34	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.43	1
2,4-Dimethylphenol	150		ug/l	5.0	1.2	1
2-Nitrophenol	ND		ug/l	10	0.48	1
4-Nitrophenol	ND		ug/l	10	1.2	1
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	0.59	1
Phenol	ND		ug/l	5.0	0.26	1
2-Methylphenol	41		ug/l	5.0	0.53	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.47	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.45	1
Benzoic Acid	12	J	ug/l	50	1.0	1
Benzyl Alcohol	ND		ug/l	2.0	0.47	1
Carbazole	190		ug/l	2.0	0.53	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	80		21-120
Phenol-d6	49		10-120
Nitrobenzene-d5	98		23-120
2-Fluorobiphenyl	94		15-120
2,4,6-Tribromophenol	144	Q	10-120
4-Terphenyl-d14	124		41-149



**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

Lab ID: L1218727-02 D2  
Client ID: MW-N2-101712  
Sample Location: W. 42ND, NY, NY  
Matrix: Water  
Analytical Method: 1,8270D-SIM  
Analytical Date: 10/24/12 14:27  
Analyst: AS

Date Collected: 10/17/12 14:25  
Date Received: 10/17/12  
Field Prep: Not Specified  
Extraction Method: EPA 3510C  
Extraction Date: 10/18/12 23:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	8400		ug/l	100	32.	500

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**SAMPLE RESULTS**

Lab ID: L1218727-02 D  
 Client ID: MW-N2-101712  
 Sample Location: W. 42ND, NY, NY  
 Matrix: Water  
 Analytical Method: 1,8270D-SIM  
 Analytical Date: 10/24/12 10:44  
 Analyst: AS

Date Collected: 10/17/12 14:25  
 Date Received: 10/17/12  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 10/18/12 23:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	190		ug/l	50	16.	250
2-Chloronaphthalene	ND		ug/l	50	16.	250
Fluoranthene	18	J	ug/l	50	11.	250
Hexachlorobutadiene	ND		ug/l	120	18.	250
Naphthalene	7100	E	ug/l	50	16.	250
Benzo(a)anthracene	ND		ug/l	50	14.	250
Benzo(a)pyrene	ND		ug/l	50	17.	250
Benzo(b)fluoranthene	ND		ug/l	50	18.	250
Benzo(k)fluoranthene	ND		ug/l	50	17.	250
Chrysene	ND		ug/l	50	12.	250
Acenaphthylene	13	J	ug/l	50	12.	250
Anthracene	22	J	ug/l	50	16.	250
Benzo(ghi)perylene	ND		ug/l	50	18.	250
Fluorene	67		ug/l	50	14.	250
Phenanthrene	90		ug/l	50	16.	250
Dibenzo(a,h)anthracene	ND		ug/l	50	18.	250
Indeno(1,2,3-cd)Pyrene	ND		ug/l	50	20.	250
Pyrene	ND		ug/l	50	14.	250
2-Methylnaphthalene	200		ug/l	50	15.	250
Pentachlorophenol	ND		ug/l	200	47.	250
Hexachlorobenzene	ND		ug/l	200	3.5	250
Hexachloroethane	ND		ug/l	200	16.	250

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

Project Name: RIVER PLACE

Lab Number: L1218727

Project Number: 170040901

Report Date: 10/24/12

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D  
 Analytical Date: 10/19/12 12:11  
 Analyst: RC

Extraction Method: EPA 3510C  
 Extraction Date: 10/18/12 23:01

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG568116-1					
Acenaphthene	ND		ug/l	2.0	0.55
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.67
Hexachlorobenzene	ND		ug/l	2.0	0.65
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39
2-Chloronaphthalene	ND		ug/l	2.0	0.47
1,2-Dichlorobenzene	ND		ug/l	2.0	0.55
1,3-Dichlorobenzene	ND		ug/l	2.0	0.55
1,4-Dichlorobenzene	ND		ug/l	2.0	0.55
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.85
2,4-Dinitrotoluene	ND		ug/l	5.0	0.45
2,6-Dinitrotoluene	ND		ug/l	5.0	0.46
Fluoranthene	ND		ug/l	2.0	0.51
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.61
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.67
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.50
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.40
Hexachlorobutadiene	ND		ug/l	2.0	0.81
Hexachlorocyclopentadiene	ND		ug/l	20	2.1
Hexachloroethane	ND		ug/l	2.0	0.66
Isophorone	ND		ug/l	5.0	0.35
Naphthalene	ND		ug/l	2.0	0.72
Nitrobenzene	ND		ug/l	2.0	0.50
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.70
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.39
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	1.4
Butyl benzyl phthalate	ND		ug/l	5.0	0.46
Di-n-butylphthalate	ND		ug/l	5.0	0.54
Di-n-octylphthalate	ND		ug/l	5.0	0.53
Diethyl phthalate	ND		ug/l	5.0	0.45
Dimethyl phthalate	ND		ug/l	5.0	0.45
Benzo(a)anthracene	ND		ug/l	2.0	0.82

Project Name: RIVER PLACE

Lab Number: L1218727

Project Number: 170040901

Report Date: 10/24/12

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D  
 Analytical Date: 10/19/12 12:11  
 Analyst: RC

Extraction Method: EPA 3510C  
 Extraction Date: 10/18/12 23:01

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG568116-1					
Benzo(a)pyrene	ND		ug/l	2.0	0.48
Benzo(b)fluoranthene	ND		ug/l	2.0	0.48
Benzo(k)fluoranthene	ND		ug/l	2.0	0.48
Chrysene	ND		ug/l	2.0	0.56
Acenaphthylene	ND		ug/l	2.0	0.50
Anthracene	ND		ug/l	2.0	0.47
Benzo(ghi)perylene	ND		ug/l	2.0	0.53
Fluorene	ND		ug/l	2.0	0.49
Phenanthrene	ND		ug/l	2.0	0.49
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.48
Indeno(1,2,3-cd)Pyrene	ND		ug/l	2.0	0.48
Pyrene	ND		ug/l	2.0	0.44
Biphenyl	ND		ug/l	2.0	0.50
4-Chloroaniline	ND		ug/l	5.0	0.83
2-Nitroaniline	ND		ug/l	5.0	0.40
3-Nitroaniline	ND		ug/l	5.0	0.59
4-Nitroaniline	ND		ug/l	5.0	0.55
Dibenzofuran	ND		ug/l	2.0	0.47
2-Methylnaphthalene	ND		ug/l	2.0	0.55
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.65
Acetophenone	ND		ug/l	5.0	0.55
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.45
P-Chloro-M-Cresol	ND		ug/l	2.0	0.50
2-Chlorophenol	ND		ug/l	2.0	0.34
2,4-Dichlorophenol	ND		ug/l	5.0	0.43
2,4-Dimethylphenol	ND		ug/l	5.0	1.2
2-Nitrophenol	ND		ug/l	10	0.48
4-Nitrophenol	ND		ug/l	10	1.2
2,4-Dinitrophenol	ND		ug/l	20	1.4
4,6-Dinitro-o-cresol	ND		ug/l	10	0.59
Pentachlorophenol	ND		ug/l	10	1.2

Project Name: RIVER PLACE

Lab Number: L1218727

Project Number: 170040901

Report Date: 10/24/12

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D  
 Analytical Date: 10/19/12 12:11  
 Analyst: RC

Extraction Method: EPA 3510C  
 Extraction Date: 10/18/12 23:01

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG568116-1					
Phenol	ND		ug/l	5.0	0.26
2-Methylphenol	ND		ug/l	5.0	0.53
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.47
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.45
Benzoic Acid	ND		ug/l	50	1.0
Benzyl Alcohol	ND		ug/l	2.0	0.47
Carbazole	ND		ug/l	2.0	0.53

#### Tentatively Identified Compounds

Unknown 6.9 J ug/l

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		21-120
Phenol-d6	38		10-120
Nitrobenzene-d5	73		23-120
2-Fluorobiphenyl	74		15-120
2,4,6-Tribromophenol	84		10-120
4-Terphenyl-d14	96		41-149

Project Name: RIVER PLACE

Lab Number: L1218727

Project Number: 170040901

Report Date: 10/24/12

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D-SIM  
 Analytical Date: 10/23/12 21:41  
 Analyst: AS

Extraction Method: EPA 3510C  
 Extraction Date: 10/18/12 23:05

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG568117-1					
Acenaphthene	ND		ug/l	0.20	0.06
2-Chloronaphthalene	ND		ug/l	0.20	0.07
Fluoranthene	ND		ug/l	0.20	0.04
Hexachlorobutadiene	ND		ug/l	0.50	0.07
Naphthalene	ND		ug/l	0.20	0.06
Benzo(a)anthracene	ND		ug/l	0.20	0.06
Benzo(a)pyrene	ND		ug/l	0.20	0.07
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07
Chrysene	ND		ug/l	0.20	0.05
Acenaphthylene	ND		ug/l	0.20	0.05
Anthracene	ND		ug/l	0.20	0.06
Benzo(ghi)perylene	ND		ug/l	0.20	0.07
Fluorene	ND		ug/l	0.20	0.06
Phenanthrene	ND		ug/l	0.20	0.06
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20	0.08
Pyrene	ND		ug/l	0.20	0.06
2-Methylnaphthalene	ND		ug/l	0.20	0.06
Pentachlorophenol	ND		ug/l	0.80	0.19
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.07

**Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12**Method Blank Analysis**  
**Batch Quality Control****Analytical Method:** 1,8270D-SIM**Extraction Method:** EPA 3510C**Analytical Date:** 10/23/12 21:41**Extraction Date:** 10/18/12 23:05**Analyst:** AS

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG568117-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		21-120
Phenol-d6	36		10-120
Nitrobenzene-d5	80		23-120
2-Fluorobiphenyl	71		15-120
2,4,6-Tribromophenol	72		10-120
4-Terphenyl-d14	86		41-149



# Lab Control Sample Analysis

## Batch Quality Control

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG568116-2 WG568116-3								
Acenaphthene	83		88		37-111	6		30
1,2,4-Trichlorobenzene	59		67		39-98	13		30
Hexachlorobenzene	101		104		40-140	3		30
Bis(2-chloroethyl)ether	82		87		40-140	6		30
2-Chloronaphthalene	80		88		40-140	10		30
1,2-Dichlorobenzene	55		64		40-140	15		30
1,3-Dichlorobenzene	50		60		40-140	18		30
1,4-Dichlorobenzene	51		61		36-97	18		30
3,3'-Dichlorobenzidine	95		93		40-140	2		30
2,4-Dinitrotoluene	108	Q	117	Q	24-96	8		30
2,6-Dinitrotoluene	103		112		40-140	8		30
Fluoranthene	102		108		40-140	6		30
4-Chlorophenyl phenyl ether	94		99		40-140	5		30
4-Bromophenyl phenyl ether	102		109		40-140	7		30
Bis(2-chloroisopropyl)ether	69		75		40-140	8		30
Bis(2-chloroethoxy)methane	81		89		40-140	9		30
Hexachlorobutadiene	50		58		40-140	15		30
Hexachlorocyclopentadiene	40		46		40-140	14		30
Hexachloroethane	44		54		40-140	20		30
Isophorone	78		87		40-140	11		30
Naphthalene	66		72		40-140	9		30

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** RIVER PLACE

**Project Number:** 170040901

**Lab Number:** L1218727

**Report Date:** 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG568116-2 WG568116-3								
Nitrobenzene	83		88		40-140	6		30
NitrosoDiPhenylAmine(NDPA)/DPA	103		108		40-140	5		30
n-Nitrosodi-n-propylamine	80		87		29-132	8		30
Bis(2-Ethylhexyl)phthalate	109		116		40-140	6		30
Butyl benzyl phthalate	109		119		40-140	9		30
Di-n-butylphthalate	106		112		40-140	6		30
Di-n-octylphthalate	114		121		40-140	6		30
Diethyl phthalate	103		108		40-140	5		30
Dimethyl phthalate	99		104		40-140	5		30
Benzo(a)anthracene	101		106		40-140	5		30
Benzo(a)pyrene	103		105		40-140	2		30
Benzo(b)fluoranthene	100		104		40-140	4		30
Benzo(k)fluoranthene	100		109		40-140	9		30
Chrysene	98		102		40-140	4		30
Acenaphthylene	84		92		45-123	9		30
Anthracene	101		107		40-140	6		30
Benzo(ghi)perylene	99		100		40-140	1		30
Fluorene	95		100		40-140	5		30
Phenanthrene	96		101		40-140	5		30
Dibenzo(a,h)anthracene	102		105		40-140	3		30
Indeno(1,2,3-cd)Pyrene	100		103		40-140	3		30

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG568116-2 WG568116-3								
Pyrene	101		108		26-127	7		30
Biphenyl	85		91			7		30
4-Chloroaniline	72		67		40-140	7		30
2-Nitroaniline	82		81		52-143	1		30
3-Nitroaniline	81		74		25-145	9		30
4-Nitroaniline	90		94		51-143	4		30
Dibenzofuran	91		96		40-140	5		30
2-Methylnaphthalene	74		80		40-140	8		30
1,2,4,5-Tetrachlorobenzene	76		82		2-134	8		30
Acetophenone	80		85		39-129	6		30
2,4,6-Trichlorophenol	95		103		30-130	8		30
P-Chloro-M-Cresol	97		108	Q	23-97	11		30
2-Chlorophenol	79		85		27-123	7		30
2,4-Dichlorophenol	91		98		30-130	7		30
2,4-Dimethylphenol	83		92		30-130	10		30
2-Nitrophenol	86		92		30-130	7		30
4-Nitrophenol	55		64		10-80	15		30
2,4-Dinitrophenol	94		100		20-130	6		30
4,6-Dinitro-o-cresol	98		103		20-164	5		30
Pentachlorophenol	105	Q	108	Q	9-103	3		30
Phenol	43		47		12-110	9		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG568116-2 WG568116-3								
2-Methylphenol	78		85		30-130	9		30
3-Methylphenol/4-Methylphenol	67		74		30-130	10		30
2,4,5-Trichlorophenol	105		113		30-130	7		30
Benzoic Acid	41		45			9		30
Benzyl Alcohol	68		73			7		30
Carbazole	109		114		55-144	4		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	63		66		21-120
Phenol-d6	45		48		10-120
Nitrobenzene-d5	86		88		23-120
2-Fluorobiphenyl	82		87		15-120
2,4,6-Tribromophenol	111		108		10-120
4-Terphenyl-d14	104		108		41-149

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG568117-2 WG568117-3								
Acenaphthene	87		83		37-111	5		40
2-Chloronaphthalene	82		77		40-140	6		40
Fluoranthene	111		115		40-140	4		40
Hexachlorobutadiene	62		55		40-140	12		40
Naphthalene	76		70		40-140	8		40
Benzo(a)anthracene	118		121		40-140	3		40
Benzo(a)pyrene	100		103		40-140	3		40
Benzo(b)fluoranthene	108		118		40-140	9		40
Benzo(k)fluoranthene	108		108		40-140	0		40
Chrysene	97		98		40-140	1		40
Acenaphthylene	96		92		40-140	4		40
Anthracene	96		104		40-140	8		40
Benzo(ghi)perylene	106		109		40-140	3		40
Fluorene	100		98		40-140	2		40
Phenanthrene	93		96		40-140	3		40
Dibenzo(a,h)anthracene	94		97		40-140	3		40
Indeno(1,2,3-cd)Pyrene	109		112		40-140	3		40
Pyrene	104		108		26-127	4		40
2-Methylnaphthalene	82		75		40-140	9		40
Pentachlorophenol	90		98		9-103	9		40
Hexachlorobenzene	89		92		40-140	3		40

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** RIVER PLACE**Lab Number:** L1218727**Project Number:** 170040901**Report Date:** 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG568117-2 WG568117-3								
Hexachloroethane	60		54		40-140	11		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	59		53		21-120
Phenol-d6	43		40		10-120
Nitrobenzene-d5	92		87		23-120
2-Fluorobiphenyl	81		75		15-120
2,4,6-Tribromophenol	95		101		10-120
4-Terphenyl-d14	102		106		41-149

## METALS

Project Name: RIVER PLACE

Lab Number: L1218727

Project Number: 170040901

Report Date: 10/24/12

**SAMPLE RESULTS**

Lab ID: L1218727-01

Date Collected: 10/17/12 11:45

Client ID: MW-S2-101712

Date Received: 10/17/12

Sample Location: W. 42ND, NY, NY

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 - Westborough Lab											
Mercury, Total	0.0008		mg/l	0.0002	0.0001	1	10/23/12 12:50	10/23/12 18:35	EPA 7470A	1,7470A	JH





Project Name: RIVER PLACE

Lab Number: L1218727

Project Number: 170040901

Report Date: 10/24/12

## SAMPLE RESULTS

Lab ID: L1218727-01 D

Date Collected: 10/17/12 11:45

Client ID: MW-S2-101712

Date Received: 10/17/12

Sample Location: W. 42ND, NY, NY

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 - Westborough Lab											
Aluminum, Total	3.17		mg/l	0.100	0.020	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Antimony, Total	ND		mg/l	0.0050	0.0010	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Arsenic, Total	0.0105		mg/l	0.0050	0.0020	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Barium, Total	0.1968		mg/l	0.0050	0.0010	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Beryllium, Total	ND		mg/l	0.0050	0.0010	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Cadmium, Total	ND		mg/l	0.0020	0.0005	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Calcium, Total	189		mg/l	1.00	0.320	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Chromium, Total	0.0131		mg/l	0.0100	0.0020	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Cobalt, Total	0.0089		mg/l	0.0050	0.0010	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Copper, Total	0.0227		mg/l	0.0100	0.0010	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Iron, Total	12.1		mg/l	0.500	0.130	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Lead, Total	0.1087		mg/l	0.0050	0.0020	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Magnesium, Total	43.8		mg/l	1.00	0.230	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Manganese, Total	0.5749		mg/l	0.0050	0.0010	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Nickel, Total	0.0108		mg/l	0.0050	0.0010	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Potassium, Total	18.1		mg/l	1.00	0.270	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Selenium, Total	ND		mg/l	0.050	0.003	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Silver, Total	0.0010	J	mg/l	0.0040	0.0010	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Sodium, Total	32.6		mg/l	1.00	0.150	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Thallium, Total	ND		mg/l	0.0050	0.0003	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Vanadium, Total	0.0183	J	mg/l	0.0500	0.0010	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK
Zinc, Total	0.0411	J	mg/l	0.1000	0.0120	10	10/18/12 12:28	10/20/12 14:55	EPA 3005A	1,6020A	AK



Project Name: RIVER PLACE

Lab Number: L1218727

Project Number: 170040901

Report Date: 10/24/12

**SAMPLE RESULTS**

Lab ID: L1218727-02

Date Collected: 10/17/12 14:25

Client ID: MW-N2-101712

Date Received: 10/17/12

Sample Location: W. 42ND, NY, NY

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 - Westborough Lab											
Mercury, Total	ND		mg/l	0.0002	0.0001	1	10/23/12 12:50	10/23/12 18:37	EPA 7470A	1,7470A	JH



Project Name: RIVER PLACE

Lab Number: L1218727

Project Number: 170040901

Report Date: 10/24/12

## SAMPLE RESULTS

Lab ID: L1218727-02 D

Date Collected: 10/17/12 14:25

Client ID: MW-N2-101712

Date Received: 10/17/12

Sample Location: W. 42ND, NY, NY

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 - Westborough Lab											
Aluminum, Total	0.069	J	mg/l	0.100	0.020	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Antimony, Total	ND		mg/l	0.0050	0.0010	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Arsenic, Total	0.0076		mg/l	0.0050	0.0020	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Barium, Total	0.1574		mg/l	0.0050	0.0010	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Beryllium, Total	ND		mg/l	0.0050	0.0010	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Cadmium, Total	ND		mg/l	0.0020	0.0005	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Calcium, Total	166		mg/l	1.00	0.320	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Chromium, Total	ND		mg/l	0.0100	0.0020	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Cobalt, Total	0.0122		mg/l	0.0050	0.0010	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Copper, Total	0.0020	J	mg/l	0.0100	0.0010	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Iron, Total	1.27		mg/l	0.500	0.130	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Lead, Total	0.0024	J	mg/l	0.0050	0.0020	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Magnesium, Total	42.0		mg/l	1.00	0.230	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Manganese, Total	0.5428		mg/l	0.0050	0.0010	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Nickel, Total	0.0028	J	mg/l	0.0050	0.0010	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Potassium, Total	21.3		mg/l	1.00	0.270	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Selenium, Total	ND		mg/l	0.050	0.003	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Silver, Total	ND		mg/l	0.0040	0.0010	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Sodium, Total	127		mg/l	1.00	0.150	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Thallium, Total	ND		mg/l	0.0050	0.0003	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Vanadium, Total	0.0051	J	mg/l	0.0500	0.0010	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK
Zinc, Total	0.0235	J	mg/l	0.1000	0.0120	10	10/18/12 12:28	10/20/12 14:58	EPA 3005A	1,6020A	AK



Project Name: RIVER PLACE

Lab Number: L1218727

Project Number: 170040901

Report Date: 10/24/12

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-02 Batch: WG567951-1										
Aluminum, Total	ND		mg/l	0.010	0.002	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Antimony, Total	0.0004	J	mg/l	0.0005	0.0001	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Arsenic, Total	ND		mg/l	0.0005	0.0002	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Barium, Total	ND		mg/l	0.0005	0.0001	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Beryllium, Total	ND		mg/l	0.0005	0.0001	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Cadmium, Total	ND		mg/l	0.0002	0.0001	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Calcium, Total	ND		mg/l	0.100	0.032	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Chromium, Total	ND		mg/l	0.0010	0.0002	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Cobalt, Total	ND		mg/l	0.0005	0.0001	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Copper, Total	ND		mg/l	0.0010	0.0001	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Iron, Total	ND		mg/l	0.050	0.013	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Lead, Total	ND		mg/l	0.0005	0.0002	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Magnesium, Total	ND		mg/l	0.100	0.023	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Manganese, Total	0.0002	J	mg/l	0.0005	0.0001	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Nickel, Total	ND		mg/l	0.0005	0.0001	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Potassium, Total	ND		mg/l	0.100	0.027	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Selenium, Total	ND		mg/l	0.005	0.0003	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Silver, Total	ND		mg/l	0.0004	0.0001	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Sodium, Total	0.024	J	mg/l	0.100	0.015	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Thallium, Total	ND		mg/l	0.0005	0.00003	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Vanadium, Total	ND		mg/l	0.0050	0.0001	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK
Zinc, Total	0.0017	J	mg/l	0.0100	0.0012	1	10/18/12 12:28	10/20/12 14:34	1,6020A	AK

### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-02 Batch: WG569002-1										
Mercury, Total	ND		mg/l	0.0002	0.0001	1	10/23/12 12:50	10/23/12 18:07	1,7470A	JH



**Project Name:** RIVER PLACE

**Lab Number:** L1218727

**Project Number:** 170040901

**Report Date:** 10/24/12

## **Method Blank Analysis Batch Quality Control**

### **Prep Information**

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Digestion Method: EPA 7470A

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 Batch: WG567951-2								
Aluminum, Total	94		-		80-120	-		
Antimony, Total	91		-		80-120	-		
Arsenic, Total	102		-		80-120	-		
Barium, Total	95		-		80-120	-		
Beryllium, Total	97		-		80-120	-		
Cadmium, Total	106		-		80-120	-		
Calcium, Total	96		-		80-120	-		
Chromium, Total	95		-		80-120	-		
Cobalt, Total	98		-		80-120	-		
Copper, Total	99		-		80-120	-		
Iron, Total	105		-		80-120	-		
Lead, Total	99		-		80-120	-		
Magnesium, Total	86		-		80-120	-		
Manganese, Total	93		-		80-120	-		
Nickel, Total	96		-		80-120	-		
Potassium, Total	85		-		80-120	-		
Selenium, Total	104		-		80-120	-		
Silver, Total	97		-		80-120	-		
Sodium, Total	80		-		80-120	-		
Thallium, Total	93		-		80-120	-		
Vanadium, Total	98		-		80-120	-		

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** RIVER PLACE**Project Number:** 170040901**Lab Number:** L1218727**Report Date:** 10/24/12

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>LCSD %Recovery</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>RPD Limits</b>
Total Metals - Westborough Lab Associated sample(s): 01-02 Batch: WG567951-2					
Zinc, Total	109	-	80-120	-	
Total Metals - Westborough Lab Associated sample(s): 01-02 Batch: WG569002-2					
Mercury, Total	107	-	80-120	-	

# Matrix Spike Analysis

## Batch Quality Control

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02    QC Batch ID: WG567951-4    QC Sample: L1218487-01    Client ID: MS Sample												
Aluminum, Total	0.422	2	1.98	78	Q	-	-		80-120	-		20
Antimony, Total	0.0026J	0.5	0.4890	98		-	-		80-120	-		20
Arsenic, Total	0.0037J	0.12	0.1270	106		-	-		80-120	-		20
Barium, Total	0.1083	2	2.007	95		-	-		80-120	-		20
Beryllium, Total	ND	0.05	0.0403	80		-	-		80-120	-		20
Cadmium, Total	ND	0.051	0.0567	111		-	-		80-120	-		20
Calcium, Total	453.	10	442	0	Q	-	-		80-120	-		20
Chromium, Total	ND	0.2	0.1852	93		-	-		80-120	-		20
Cobalt, Total	ND	0.5	0.4750	95		-	-		80-120	-		20
Copper, Total	0.0013J	0.25	0.2298	92		-	-		80-120	-		20
Iron, Total	17.4	1	17.1	0	Q	-	-		80-120	-		20
Lead, Total	0.0021J	0.51	0.5121	100		-	-		80-120	-		20
Magnesium, Total	17.6	10	23.2	56	Q	-	-		80-120	-		20
Manganese, Total	15.04	0.5	14.31	0	Q	-	-		80-120	-		20
Nickel, Total	0.0046J	0.5	0.4760	95		-	-		80-120	-		20
Potassium, Total	21.0	10	27.9	69	Q	-	-		80-120	-		20
Selenium, Total	ND	0.12	0.117	98		-	-		80-120	-		20
Silver, Total	ND	0.05	0.0475	95		-	-		80-120	-		20
Sodium, Total	1120	10	994	0	Q	-	-		80-120	-		20
Thallium, Total	ND	0.12	0.1144	95		-	-		80-120	-		20
Vanadium, Total	ND	0.5	0.4906	98		-	-		80-120	-		20



# Matrix Spike Analysis

## Batch Quality Control

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

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: WG567951-4 QC Sample: L1218487-01 Client ID: MS Sample									
Zinc, Total	ND	0.5	0.5019	100	-	-	80-120	-	20
Total Metals - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG569002-4 QC Sample: L1218202-11 Client ID: MS Sample									
Mercury, Total	ND	0.001	0.0013	127	-	-	70-130	-	20

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** RIVER PLACE

**Project Number:** 170040901

**Lab Number:** L1218727

**Report Date:** 10/24/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG567951-3 QC Sample: L1218487-01 Client ID: DUP Sample						
Aluminum, Total	0.422	0.377	mg/l	11		20
Antimony, Total	0.0026J	0.0022J	mg/l	NC		20
Arsenic, Total	0.0037J	0.0034J	mg/l	NC		20
Barium, Total	0.1083	0.1058	mg/l	2		20
Beryllium, Total	ND	ND	mg/l	NC		20
Cadmium, Total	ND	ND	mg/l	NC		20
Calcium, Total	453.	439	mg/l	3		20
Chromium, Total	ND	ND	mg/l	NC		20
Cobalt, Total	ND	0.0011J	mg/l	NC		20
Copper, Total	0.0013J	0.0013J	mg/l	NC		20
Iron, Total	17.4	17.0	mg/l	2		20
Lead, Total	0.0021J	0.0022J	mg/l	NC		20
Magnesium, Total	17.6	16.4	mg/l	7		20
Nickel, Total	0.0046J	0.0048J	mg/l	NC		20
Potassium, Total	21.0	20.2	mg/l	4		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	ND	ND	mg/l	NC		20

**Project Name:** RIVER PLACE  
**Project Number:** 170040901

## Lab Duplicate Analysis

Batch Quality Control

**Lab Number:** L1218727  
**Report Date:** 10/24/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG567951-3 QC Sample: L1218487-01 Client ID: DUP Sample					
Zinc, Total	ND	ND	mg/l	NC	20
Total Metals - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG567951-3 QC Sample: L1218487-01 Client ID: DUP Sample					
Manganese, Total	15.04	14.46	mg/l	4	20
Sodium, Total	1120	1120	mg/l	0	20
Total Metals - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG569002-3 QC Sample: L1218202-11 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/l	NC	20

# **INORGANICS & MISCELLANEOUS**

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

## SAMPLE RESULTS

Lab ID: L1218727-01

Client ID: MW-S2-101712

Sample Location: W. 42ND, NY, NY

Matrix: Water

Date Collected: 10/17/12 11:45

Date Received: 10/17/12

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.152		mg/l	0.005	0.002	1	10/23/12 13:00	10/23/12 17:02	1,9010B/9012A	JO
Cyanide, Physiologically Available	0.630		mg/l	0.025	0.0002	5	10/18/12 11:00	10/18/12 17:11	64,9014(M)	JO



Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

## SAMPLE RESULTS

Lab ID: L1218727-02

Client ID: MW-N2-101712

Sample Location: W. 42ND, NY, NY

Matrix: Water

Date Collected: 10/17/12 14:25

Date Received: 10/17/12

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.126		mg/l	0.005	0.002	1	10/23/12 13:00	10/23/12 17:05	1,9010B/9012A	JO
Cyanide, Physiologically Available	0.182		mg/l	0.005	0.00005	1	10/18/12 11:00	10/18/12 17:13	64,9014(M)	JO



**Project Name:** RIVER PLACE  
**Project Number:** 170040901

**Lab Number:** L1218727  
**Report Date:** 10/24/12

**Method Blank Analysis**  
**Batch Quality Control**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG567897-1										
Cyanide, Physiologically Available	0.005		mg/l	0.005	0.00005	1	10/18/12 11:00	10/18/12 16:45	64,9014(M)	JO
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG568954-1										
Cyanide, Total	ND		mg/l	0.005	0.002	1	10/23/12 13:00	10/23/12 16:38	1,9010B/9012A	JO

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** RIVER PLACE

**Project Number:** 170040901

**Lab Number:** L1218727

**Report Date:** 10/24/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG567897-2								
Cyanide, Physiologically Available	115		-		80-120	-		
General Chemistry - Westborough Lab NEGATIVE LCS Associated sample(s): 01-02 Batch: WG567897-3								
Cyanide, Physiologically Available	5		-		0-10	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG568954-2 WG568954-3								
Cyanide, Total	106		107		80-120	1		20



# Matrix Spike Analysis

## Batch Quality Control

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG567897-4 QC Sample: L1218727-02 Client ID: MW-N2-101712												
Cyanide, Physiologically Available	0.182	0.2	0.400	109		-	-		75-125	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG568954-4 WG568954-5 QC Sample: L1218671-01 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.218	109		0.211	106		80-120	3		20

**Lab Duplicate Analysis**  
Batch Quality Control

**Project Name:** RIVER PLACE  
**Project Number:** 170040901

**Lab Number:** L1218727  
**Report Date:** 10/24/12

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG567897-5 QC Sample: L1218727-01 Client ID: MW-S2-101712						
Cyanide, Physiologically Available	0.630	0.604	mg/l	4		20

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

## Cooler Information Custody Seal

## Cooler

A Absent

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1218727-01A	Vial HCl preserved	A	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1218727-01B	Vial HCl preserved	A	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1218727-01C	Vial HCl preserved	A	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1218727-01D	Amber 1000ml unpreserved	A	7	2.6	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1218727-01E	Amber 1000ml unpreserved	A	7	2.6	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1218727-01F	Plastic 250ml NaOH preserved	A	>12	2.6	Y	Absent	TCN-9010(14)
L1218727-01G	Plastic 250ml NaOH preserved	A	>12	2.6	Y	Absent	PACN(14)
L1218727-01H	Plastic 500ml HNO3 preserved	A	<2	2.6	Y	Absent	BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),CA-6020T(180),CR-6020T(180),K-6020T(180),NI-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)
L1218727-02A	Vial HCl preserved	A	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1218727-02B	Vial HCl preserved	A	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1218727-02C	Vial HCl preserved	A	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1218727-02D	Amber 1000ml unpreserved	A	7	2.6	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1218727-02E	Amber 1000ml unpreserved	A	7	2.6	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1218727-02F	Plastic 250ml NaOH preserved	A	>12	2.6	Y	Absent	TCN-9010(14)
L1218727-02G	Plastic 250ml NaOH preserved	A	>12	2.6	Y	Absent	PACN(14)

\*Values in parentheses indicate holding time in days

Project Name: RIVER PLACE

Project Number: 170040901

Lab Number: L1218727

Report Date: 10/24/12

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1218727-02H	Plastic 500ml HNO3 preserved	A	<2	2.6	Y	Absent	BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),CA-6020T(180),CR-6020T(180),K-6020T(180),NI-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)
L1218727-03A	Vial HCl preserved	A	N/A	2.6	Y	Absent	NYTCL-8260(14)
L1218727-03B	Vial HCl preserved	A	N/A	2.6	Y	Absent	NYTCL-8260(14)

\*Values in parentheses indicate holding time in days

**Project Name:** RIVER PLACE  
**Project Number:** 170040901

**Lab Number:** L1218727  
**Report Date:** 10/24/12

## GLOSSARY

### Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

### Footnotes

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

### Terms

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

<b>A</b>	- Spectra identified as "Aldol Condensation Product".
<b>B</b>	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) 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.
<b>C</b>	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
<b>D</b>	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
<b>E</b>	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
<b>G</b>	- 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.
<b>H</b>	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
<b>I</b>	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
<b>M</b>	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
<b>NJ</b>	- 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.

**Report Format:** DU Report with "J" Qualifiers



**Project Name:** RIVER PLACE  
**Project Number:** 170040901

**Lab Number:** L1218727  
**Report Date:** 10/24/12

**Data Qualifiers**

- 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.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL). This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample.

Report Format: DU Report with "J" Qualifiers



**Project Name:** RIVER PLACE  
**Project Number:** 170040901

**Lab Number:** L1218727  
**Report Date:** 10/24/12

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 64 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). August 2004.

## LIMITATION OF LIABILITIES

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

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



## Certificate/Approval Program Summary

Last revised August 16, 2012 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.  
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

*Drinking Water* (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Selenium, Silver, Sodium, Thallium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223, Enumeration and P/A), E. Coli. – Colilert (SM9223, Enumeration and P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform-EC Medium (SM 9221E).

*Wastewater/Non-Potable Water* (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), E. Coli – Colilert (SM9223 Enumeration), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterococcus - Enterolert.

*Solid Waste/Soil* (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP (Silvex), Dalapon, Volatile Organics (SW 8260), Acid Extractables (Phenols) (SW 8270), Benzidines (SW 8270), Phthalates (SW 8270), Nitrosamines (SW 8270), Nitroaromatics & Cyclic Ketones (SW 8270), PAHs (SW 8270), Haloethers (SW 8270), Chlorinated Hydrocarbons (SW 8270). )

### Maine Department of Human Services Certificate/Lab ID: 2009024.

*Drinking Water* (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

*Wastewater/Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010B, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223D, 9222D. Organic Parameters: 608, 624, 625, 8081A, 8082, 8330, 8151A, 8260B, 8270C, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

*Solid Waste/Soil* (Inorganic Parameters: 9010B, 9012A, 9014A, 9030B, 9040B, 9045C, 6010B, 7471A, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8330, 8151A, 8081A, 8082, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

### Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

*Drinking Water* (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

*Non-Potable Water* (Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7



for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: 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-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

**New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. *NELAP Accredited.***

*Drinking Water* (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

*Non-Potable Water* (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, SW-846 6010B, 6010C, 6020, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9030B, 9040B, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D, 3060A. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260B, 8270C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082, 8082A, 8081A, 8081B, 8151A, 8330, 8270C-SIM, 8270D-SIM.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846 6010B, 6010C, 7196A, 7471A, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040B, 9045C, 9050, 9065,1311, 1312, 3005A, 3050B, 3060A. Organic Parameters: SW-846 3540C, 3546, 3050B, 3580A, 3630C, 5030B, 5035, 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330, 8151A, 8015B, 8015C, 8082, 8082A, 8081A, 8081B.)

**New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. *NELAP Accredited.***

*Drinking Water* (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.1, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

*Non-Potable Water* (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, 2540G, EPA 120.1, SM2510B, SM2520B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, SW-846 9040B, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ EPH.)

*Solid & Chemical Materials* (Inorganic Parameters: SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9014, 9012A, 9040B, 9040C, 9045C, 9045D, 9050A, 9065, 9251. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

**New York Department of Health Certificate/Lab ID: 11148. *NELAP Accredited.***

*Drinking Water* (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

*Non-Potable Water* (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6010C, 6020, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, LACHAT 10-204-00-1-A, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 624, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 625, 608, 8081A, 8081B, 8151A, 8330, 8082, 8082A, EPA 3510C, 5030B.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1010, 1030, EPA 6010B, 6010C, 7196A, 7471A, 7471B, 9012A, 9014, 9065, 9050A, EPA 1311, 1312, 3005A, 3050B, 9010B, 9040C, 9045D. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8015B, 8015C, 8081A, 8081B, 8151A, 8330, 8082 8082A, 3540C, 3546, 3580, 3580A, 5030B, 5035A-H, 5035A-L.)

**North Carolina Department of the Environment and Natural Resources** Certificate/Lab ID : 666. (Inorganic Parameters: SM2310B, 2320B, 4500Cl-E, 4500Cn-E, 9014, Lachat 10-204-00-1-X, 1010A, 1030, 4500NO3-F, 353.2, 4500P-E, 4500SO4-E, 300.0, 4500S-D, 5310B, 5310C, 6010C, 6020A, 200.7, 200.8, 3500Cr-B, 7196A, 245.1, 7471A, 7471B, 1311, 1312. Organic Parameters: 608, 8081B, 8082A, 624, 8260B, 625, 8270D, 8151A, 8015C, 504.1, MA-EPH, MA-VPH.)

*Drinking Water Program* Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

**Pennsylvania Department of Environmental Protection** Certificate/Lab ID : 68-03671. NELAP Accredited.  
*Drinking Water* (Inorganic Parameters: 200.7, 200.8, 245.2, 300.0, 332.0, 2120B, 2320B, 2510B, 2540C, 4500-CN-CE, 4500F-C, 4500H+-B, 4500NO3-F, 5310C. Organic Parameters: EPA 524.2, 504.1)

*Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1312, 3005A, 3015, 3060A, 200.7, 200.8, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P, BE, 245.1, 300.0, 3501., 350.2, 353.2, 420.1, 6010B, 6010C, 6020, 6020A, 7196A, 7470A, 9010B, 9030B, 9040B, Lachat 10-107-06-2-D, NJ-EPH, 2120B, 2310B, 2320B, 2340B, 2510C, 2540B, 2540C, 3500Cr-D, 436C, 4500CN-CE, 4500Cl-E, 4500F-B, 4500F-C, 4500H+-B, 4500NO2-B, 4500NO3-F, 4500S-D, 4500SO3-B, 5310BCD, 5540C. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081A, 8081B, 8082, 8082A, 8151A, 8260B, 8270C, 8270D, 8330, 8015B, )

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3005A, 3050B, 3060A, 6010B, 6010C, 6020A, 7196A, 7471A, 7471B, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065, SM 4500NH3-BH, 9030B, 9038, 9251. Organic Parameters: 3540C, 3546, 3580A, 3630C, 5035, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330, NJ-EPH.)

**Rhode Island Department of Health** Certificate/Lab ID: LAO00065. **NELAP Accredited via NJ-DEP.**

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

**Texas Commission on Environmental Quality** Certificate/Lab ID: T104704476-09-1. **NELAP Accredited.**

*Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S<sup>2-</sup> D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

**Virginia Division of Consolidated Laboratory Services** Certificate/Lab ID: 460195. **NELAP Accredited.**

*Drinking Water* (Inorganic Parameters: EPA 200.7, 200.8, 300.0, 2510B, 2120B, 2540C, 4500CN-CE, 245.2, 2320B, 4500F-C, 4500F-C, 4500NO3-F, 5310C. Organic Parameters: EPA 504.1, 524.2.)

*Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 3005A, 3015, 1312, 6010B, 6010C, 3060A, 353.2, 420.1, 6020, 6020A, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X, 7196A, 7470A, 9010B, 9040B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500Cl-E, 4500F-B, 4500F-C, 4500PE, 510AC, 5210B, 5310B 5310C, 5540C. Organic Parameters: EPA 3510C, 3630C, 5030B, 8260B, 608, 624, 625, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330, )

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1010A, 1030, 3060A, 3050B, 1311, 1312, 6010B, 6010C, 6020, , 7196A, 7471A, 7471B, 6020A, 9030B, 9010B, 9012A, 9014 9040B, 9045C, 9050A, 9065. Organic Parameters: EPA 5035, 3540C, 3546, 3550, 3580, 3630C, 8260B, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330.)

**Department of Defense, L-A-B** Certificate/Lab ID: L2217.

*Drinking Water* (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

*Non-Potable Water* (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6010C, 6020, 6020A, 245.1, 245.2, 7470A, 9040B, 9010B, 180.1. 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 4500CL-D, 5220D, 5310C, 2130B, 2320B, 2540C, 3005A, 3015, 9010B, 9056. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A, 8082, 8082A, 8081A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

*Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 6010C, 7471A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 9012A, 9040B, 9045C, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A/B-prep, 8082, 8082A, 8081A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)*

**The following analytes are not included in our current NELAP/TNI Scope of Accreditation:**

**EPA 8260B:** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO<sub>2</sub> in a soil matrix, NO<sub>3</sub> in a soil matrix, SO<sub>4</sub> in a soil matrix. **EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2013  
Issued April 1, 2012

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

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

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

NY Lab Id No. 11148

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

**Drinking Water Bacteriology**

Coliform, Total / E. coli (Qualitative)	SM 18-21 9222B(97)/40CFR141.21(F)61
Standard Plate Count	SM 18-21 9223B (97) (Coliform)
	SM 18-21 9215B

**Drinking Water Metals I**

Arsenic, Total	EPA 200.8 Rev. 5.4
Barium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Cadmium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Chromium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Copper, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Iron, Total	EPA 200.7 Rev. 4.4
Lead, Total	EPA 200.8 Rev. 5.4
Manganese, Total	EPA 200.7 Rev. 4.4
Mercury, Total	EPA 245.2 Rev. 1974
Selenium, Total	EPA 200.8 Rev. 5.4
Silver, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Zinc, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4

**Drinking Water Metals II**

Aluminum, Total	EPA 200.7 Rev. 4.4
Antimony, Total	EPA 200.8 Rev. 5.4

**Drinking Water Metals II**

Beryllium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Nickel, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
Thallium, Total	EPA 200.8 Rev. 5.4

**Drinking Water Metals III**

Calcium, Total	EPA 200.7 Rev. 4.4
Magnesium, Total	EPA 200.7 Rev. 4.4
Sodium, Total	EPA 200.7 Rev. 4.4

**Drinking Water Miscellaneous**

Organic Carbon, Total	SM 18-21 5310C (00)
Perchlorate	EPA 332.0 Rev. 1

**Drinking Water Non-Metals**

Alkalinity	SM 18-21 2320B (97)
Calcium Hardness	EPA 200.7 Rev. 4.4
Chloride	EPA 300.0 Rev. 2.1
Color	SM 18-21 2120B (01)
Cyanide	SM 18-21 4500-CNE (99)
Fluoride, Total	EPA 300.0 Rev. 2.1
	SM 18-21 4500-F C (97)
Nitrate (as N)	SM 18-21 4500-NO3 F (00)
Nitrite (as N)	SM 18-21 4500-NO3 F (00)
Solids, Total Dissolved	SM 18-21 2540C (97)
Specific Conductance	SM 18-21 2610B (97)

Serial No.: 46275

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

**Drinking Water Non-Metals**

Sulfate (as SO<sub>4</sub>) EPA 300.0 Rev. 2.1

**Drinking Water Trihalomethanes**

Bromodichloromethane EPA 524.2

Bromoform EPA 524.2

Chloroform EPA 524.2

Dibromochloromethane EPA 524.2

Total Trihalomethanes EPA 524.2

**Fuel Additives**

Methyl tert-butyl ether EPA 524.2

Naphthalene EPA 524.2

**Microextractibles**

1,2-Dibromo-3-chloropropane EPA 504.1

1,2-Dibromoethane EPA 504.1

**Volatile Aromatics**

1,2,3-Trichlorobenzene EPA 524.2

1,2,4-Trichlorobenzene EPA 524.2

1,2,4-Trimethylbenzene EPA 524.2

1,2-Dichlorobenzene EPA 524.2

1,3,5-Trimethylbenzene EPA 524.2

1,3-Dichlorobenzene EPA 524.2

1,4-Dichlorobenzene EPA 524.2

2-Chlorotoluene EPA 524.2

4-Chlorotoluene EPA 524.2

Benzene EPA 524.2

**Volatile Aromatics**

Bromobenzene EPA 524.2

Chlorobenzene EPA 524.2

Ethyl benzene EPA 524.2

Hexachlorobutadiene EPA 524.2

Isopropylbenzene EPA 524.2

n-Butylbenzene EPA 524.2

n-Propylbenzene EPA 524.2

p-Isopropyltoluene (P-Cymene) EPA 524.2

sec-Butylbenzene EPA 524.2

Styrene EPA 524.2

tert-Butylbenzene EPA 524.2

Toluene EPA 524.2

Total Xylenes EPA 524.2

**Volatile Halocarbons**

1,1,1,2-Tetrachloroethane EPA 524.2

1,1,1-Trichloroethane EPA 524.2

1,1,2,2-Tetrachloroethane EPA 524.2

1,1,2-Trichloroethane EPA 524.2

1,1-Dichloroethane EPA 524.2

1,1-Dichloroethene EPA 524.2

1,1-Dichloropropene EPA 524.2

1,2,3-Trichloropropane EPA 524.2

1,2-Dichloroethane EPA 524.2

1,2-Dichloropropane EPA 524.2

1,3-Dichloropropane EPA 524.2

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**ENVIRONMENTAL ANALYSES POTABLE WATER**

*All approved analytes are listed below:*

**Volatile Halocarbons**

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

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

**Acrylates**

Acrolein (Propenal)

EPA 624

EPA 8260B

Acrylonitrile

EPA 624

EPA 8260B

Ethyl methacrylate

EPA 8260B

**Amines**

2-Nitroaniline

EPA 8270C

EPA 8270D

3-Nitroaniline

EPA 8270C

EPA 8270D

4-Chloroaniline

EPA 8270C

EPA 8270D

4-Nitroaniline

EPA 8270C

EPA 8270D

Aniline

EPA 8270D

Carbazole

EPA 8270C

EPA 8270D

Pyridine

EPA 625

EPA 8270C

EPA 8270D

**Bacteriology**

Coliform, Fecal

SM 18-21 9221E (99)

SM 18-21 9222D (97)

Coliform, Total

SM 18-21 9221B (99)

SM 18-21 9222B (97)

**Bacteriology**

Standard Plate Count

SM 18-21 9215B

**Benzidines**

3,3'-Dichlorobenzidine

EPA 625

EPA 8270C

EPA 8270D

Benzidine

EPA 625

EPA 8270C

EPA 8270D

**Chlorinated Hydrocarbon Pesticides**

4,4'-DDD

EPA 608

EPA 8081A

EPA 8081B

4,4'-DDE

EPA 608

EPA 8081A

EPA 8081B

4,4'-DDT

EPA 608

EPA 8081A

EPA 8081B

Aldrin

EPA 608

EPA 8081A

EPA 8081B

alpha-BHC

EPA 608

EPA 8081A

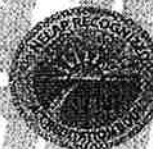
EPA 8081B

alpha-Chlordane

EPA 8081A

Serial No.: 46276

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

**Chlorinated Hydrocarbon Pesticides**

alpha-Chlordane	EPA 8081B
beta-BHC	EPA 608
	EPA 8081A
	EPA 8081B
Chlordane Total	EPA 608
	EPA 8081A
	EPA 8081B
delta-BHC	EPA 608
	EPA 8081A
	EPA 8081B
Dieldrin	EPA 608
	EPA 8081A
	EPA 8081B
Endosulfan I	EPA 608
	EPA 8081A
	EPA 8081B
Endosulfan II	EPA 608
	EPA 8081A
	EPA 8081B
Endosulfan sulfate	EPA 608
	EPA 8081A
	EPA 8081B
Endrin	EPA 608
	EPA 8081A
	EPA 8081B

**Chlorinated Hydrocarbon Pesticides**

Endrin aldehyde	EPA 608
	EPA 8081A
	EPA 8081B
Endrin Ketone	EPA 8081A
	EPA 8081B
gamma-Chlordane	EPA 8081A
	EPA 8081B
Heptachlor	EPA 608
	EPA 8081A
	EPA 8081B
Heptachlor epoxide	EPA 608
	EPA 8081A
	EPA 8081B
Lindane	EPA 608
	EPA 8081A
	EPA 8081B
Methoxychlor	EPA 608
	EPA 8081A
	EPA 8081B
Toxaphene	EPA 608
	EPA 8081A
	EPA 8081B
<b>Chlorinated Hydrocarbons</b>	
1,2,3-Trichlorobenzene	EPA 8260B
1,2,4,5-Tetrachlorobenzene	EPA 8270C

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WADSWORTH CENTER



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ALPHA ANALYTICAL  
8 WALKUP DR  
WESTBOROUGH, MA 01581-1019

NY Lab Id No: 11148

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**ENVIRONMENTAL ANALYSES NON POTABLE WATER**  
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**Chlorinated Hydrocarbons**

1,2,4,5-Tetrachlorobenzene EPA 8270D

1,2,4-Trichlorobenzene EPA 625

EPA 8270C

EPA 8270D

2-Chloronaphthalene EPA 625

EPA 8270C

EPA 8270D

Hexachlorobenzene EPA 625

EPA 8270C

EPA 8270D

Hexachlorobutadiene EPA 625

EPA 8270C

EPA 8270D

Hexachlorocyclopentadiene EPA 625

EPA 8270C

EPA 8270D

Hexachloroethane EPA 625

EPA 8270C

EPA 8270D

**Chlorophenoxy Acid Pesticides**

2,4,5-T EPA 8151A

2,4,5-TP (Silvex) EPA 8151A

2,4-D EPA 8151A

**Demand**

Biochemical Oxygen Demand SM 18-21 5210B (01)

**Demand**

Carbonaceous BOD SM 18-21 5210B (01)

Chemical Oxygen Demand EPA 410.4 Rev. 2.0

SM 18-21 5220D (97)

**Fuel Oxygenates**

Di-isopropyl ether EPA 8260B

Methyl tert-butyl ether EPA 8260B

tert-butyl alcohol EPA 8260B

tert-butyl ethyl ether (ETBE) EPA 8260B

**Haloethers**

4-Bromophenylphenyl ether EPA 625

EPA 8270C

EPA 8270D

4-Chlorophenylphenyl ether EPA 625

EPA 8270C

EPA 8270D

Bis(2-chloroisopropyl) ether EPA 625

EPA 8270C

EPA 8270D

Bis(2-chloroethoxy)methane EPA 625

EPA 8270C

EPA 8270D

Bis(2-chloroethyl) ether EPA 625

EPA 8270C

EPA 8270D

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**Low Level Polynuclear Aromatics**

**Mineral**

**Sulfate (as SO<sub>4</sub>)**

EPA 300.0 Rev. 2.1  
SM 15.426 C

**Nitroaromatics and Isophorone**

**1,3,5-Trinitrobenzene**

EPA 8330

**1,3-Dinitrobenzene**

EPA 8330

**2,4,6-Trinitrotoluene**

EPA 8330

**2,4-Dinitrotoluene**

EPA 625

**2,6-Dinitrotoluene**

EPA 625

**2-Amino-4,6-dinitrotoluene**

EPA 8330

**2-Nitrotoluene**

EPA 8330

**3-Nitrotoluene**

EPA 8330

**4-Amino-2,6-dinitrotoluene**

EPA 8330

**4-Nitrotoluene**

EPA 8330

**Hexahydro-1,3,5-trinitro-1,3,5-triazine**

EPA 8330

**Isophorone**

EPA 625

**Methyl-2,4,6-trinitrophenylamine**

EPA 8330

**Nitrobenzene**

EPA 625

**Acenaphthene**

EPA 8270D

**Acenaphthylene**

EPA 8270D

**Anthracene**

EPA 8270D

**Benzo(a)anthracene**

EPA 8270C SIM

EPA 8270D SIM

**Benzo(a)pyrene**

EPA 8270C SIM

EPA 8270D SIM

**Benzo(b)fluoranthene**

EPA 8270C SIM

EPA 8270D SIM

**Benzo(k)fluoranthene**

EPA 8270C SIM

EPA 8270D SIM

**Dibenzo(a,h)anthracene**

EPA 8270C SIM

EPA 8270D SIM

**Indeno(1,2,3-cd)pyrene**

EPA 8270C SIM

EPA 8270D SIM

**Phenanthrene**

EPA 8270D

**Pyrene**

EPA 8270D

**Mineral**

**Acidity**

SM 18-21 2310B.4a (97)

**Alkalinity**

SM 18-21 2320B (97)

**Chloride**

EPA 300.0 Rev. 2.1

SM 18-21 4500-Cl- E (97)

**Fluoride, Total**

EPA 300.0 Rev. 2.1

SM 18-21 4500-F C (97)

**Hardness, Total**

EPA 200.7 Rev. 4.4

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**Nitroaromatics and Isophorone**

Nitrobenzene	EPA 8270C
	EPA 8270D
	EPA 8330
Octahydro-tetranitro-tetrazocine	EPA 8330

**Nitrosoamines**

N-Nitrosodimethylamine	EPA 625
	EPA 8270C
	EPA 8270D
N-Nitrosodipropylamine	EPA 625
	EPA 8270C
	EPA 8270D
N-Nitrosodiphenylamine	EPA 625
	EPA 8270C
	EPA 8270D

**Nutrient**

Ammonia (as N)	EPA 350.1 Rev. 2.0
	SM 18 4500-NH3 H
Kjeldahl Nitrogen, Total	EPA 351.1 Rev. 1978
	LACHAT 10-107-06-2
Nitrate (as N)	EPA 300.0 Rev. 2.1
	EPA 353.2 Rev. 2.0
	SM 18-21 4500-NO3 F (00)
Nitrite (as N)	SM 18-21 4500-NO2 B (00)
Orthophosphate (as P)	SM 18-21 4500-P E
Phosphorus, Total	SM 18-21 4500-P E

**Organophosphate Pesticides**

Atrazine	EPA 8270C
	EPA 8270D

**Phthalate Esters**

Benzyl butyl phthalate	EPA 625
	EPA 8270C
	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 625
	EPA 8270C
	EPA 8270D
Diethyl phthalate	EPA 625
	EPA 8270C
	EPA 8270D
Dimethyl phthalate	EPA 625
	EPA 8270C
	EPA 8270D
Di-n-butyl phthalate	EPA 625
	EPA 8270C
	EPA 8270D
Di-n-octyl phthalate	EPA 625
	EPA 8270C
	EPA 8270D

**Polychlorinated Biphenyls**

PCB-1016	EPA 608
	EPA 8082
	EPA 8082A

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**Polychlorinated Biphenyls**

**Polynuclear Aromatics**

PCB-1221	EPA 608	Acenaphthene	EPA 8270D
	EPA 8082	Acenaphthylene	EPA 625
	EPA 8082A		EPA 8270C
PCB-1232	EPA 608		EPA 8270D
	EPA 8082	Anthracene	EPA 625
	EPA 8082A		EPA 8270C
PCB-1242	EPA 608		EPA 8270D
	EPA 8082	Benzo(a)anthracene	EPA 625
	EPA 8082A		EPA 8270C
PCB-1248	EPA 608		EPA 8270D
	EPA 8082	Benzo(a)pyrene	EPA 625
	EPA 8082A		EPA 8270C
PCB-1254	EPA 608		EPA 8270D
	EPA 8082	Benzo(b)fluoranthene	EPA 625
	EPA 8082A		EPA 8270C
PCB-1260	EPA 608		EPA 8270D
	EPA 8082	Benzo(ghi)perylene	EPA 625
	EPA 8082A		EPA 8270C
PCB-1262	EPA 8082		EPA 8270D
	EPA 8082A	Benzo(k)fluoranthene	EPA 625
PCB-1268	EPA 8082		EPA 8270C
	EPA 8082A		EPA 8270D
		Chrysene	EPA 625
<b>Polynuclear Aromatics</b>			EPA 8270C
Acenaphthene	EPA 625		EPA 8270D
	EPA 8270C		

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**Polynuclear Aromatics**

**Priority Pollutant Phenols**

Dibenzo(a,h)anthracene	EPA 625	2,4,6-Trichlorophenol	EPA 8270D
	EPA 8270C	2,4-Dichlorophenol	EPA 625
	EPA 8270D		EPA 8270C
Fluoranthene	EPA 625		EPA 8270D
	EPA 8270C	2,4-Dimethylphenol	EPA 625
	EPA 8270D		EPA 8270C
Fluorene	EPA 625		EPA 8270D
	EPA 8270C	2,4-Dinitrophenol	EPA 625
	EPA 8270D		EPA 8270C
Indeno(1,2,3-cd)pyrene	EPA 625		EPA 8270D
	EPA 8270C	2-Chlorophenol	EPA 625
	EPA 8270D		EPA 8270C
Naphthalene	EPA 625		EPA 8270D
	EPA 8270C	2-Methyl-4,6-dinitrophenol	EPA 625
	EPA 8270D		EPA 8270C
Phenanthrene	EPA 625		EPA 8270D
	EPA 8270C	2-Methylphenol	EPA 8270C
	EPA 8270D		EPA 8270D
Pyrene	EPA 625		EPA 625
	EPA 8270C	2-Nitrophenol	EPA 8270C
			EPA 8270D
<b>Priority Pollutant Phenols</b>			
2,4,5-Trichlorophenol	EPA 625		EPA 8270D
	EPA 8270C	3-Methylphenol	EPA 8270D
	EPA 8270D	4-Chloro-3-methylphenol	EPA 625
2,4,6-Trichlorophenol	EPA 625		EPA 8270C
	EPA 8270C		EPA 8270D

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**Priority Pollutant Phenols**

4-Methylphenol

EPA 8270C

EPA 8270D

4-Nitrophenol

EPA 625

EPA 8270C

EPA 8270D

Pentachlorophenol

EPA 625

EPA 8270C

EPA 8270D

Phenol

EPA 625

EPA 8270C

EPA 8270D

**Residue**

Solids, Total

SM 18-21 2540B (97)

Solids, Total Dissolved

SM 18-21 2540C (97)

Solids, Total Suspended

SM 18-21 2540D (97)

**Semi-Volatile Organics**

1,1'-Biphenyl

EPA 8270C

EPA 8270D

1,2-Dichlorobenzene, Semi-volatile

EPA 8270C

EPA 8270D

1,3-Dichlorobenzene, Semi-volatile

EPA 8270C

EPA 8270D

1,4-Dichlorobenzene, Semi-volatile

EPA 8270C

EPA 8270D

2-Methylnaphthalene

EPA 8270C

**Semi-Volatile Organics**

2-Methylnaphthalene

EPA 8270D

Acetophenone

EPA 8270C

EPA 8270D

Benzaldehyde

EPA 8270C

EPA 8270D

Benzoic Acid

EPA 8270C

EPA 8270D

Benzyl alcohol

EPA 8270C

EPA 8270D

Caprolactam

EPA 8270C

EPA 8270D

Dibenzofuran

EPA 8270C

EPA 8270D

**Volatile Aromatics**

1,2,4-Trichlorobenzene, Volatile

EPA 8260B

1,2,4-Trimethylbenzene

EPA 8260B

1,2-Dichlorobenzene

EPA 624

EPA 8260B

1,3,5-Trimethylbenzene

EPA 8260B

1,3-Dichlorobenzene

EPA 624

EPA 8260B

1,4-Dichlorobenzene

EPA 624

EPA 8260B

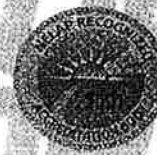
Benzene

EPA 624

EPA 8260B

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**Volatile Aromatics**

Chlorobenzene	EPA 624 EPA 8260B
Ethyl benzene	EPA 624 EPA 8260B
Isopropylbenzene	EPA 8260B
Naphthalene, Volatile	EPA 8260B
n-Butylbenzene	EPA 8260B
n-Propylbenzene	EPA 8260B
p-Isopropyltoluene (P-Cymene)	EPA 8260B
sec-Butylbenzene	EPA 8260B
Styrene	EPA 624 EPA 8260B
tert-Butylbenzene	EPA 8260B
Toluene	EPA 624 EPA 8260B
Total Xylenes	EPA 624 EPA 8260B

**Volatile Halocarbons**

1,1,1-Trichloroethane	EPA 624 EPA 8260B
1,1,2,2-Tetrachloroethane	EPA 624 EPA 8260B
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 8260B
1,1,2-Trichloroethane	EPA 624 EPA 8260B

**Volatile Halocarbons**

1,1-Dichloroethane	EPA 624
1,1-Dichloroethene	EPA 624
1,1-Dichloropropene	EPA 8260B
1,2,3-Trichloropropane	EPA 8260B
1,2-Dibromo-3-chloropropane	EPA 8260B
1,2-Dibromoethane	EPA 8260B
1,2-Dichloroethane	EPA 624 EPA 8260B
1,2-Dichloropropane	EPA 624 EPA 8260B
1,3-Dichloropropane	EPA 8260B
2,2-Dichloropropane	EPA 8260B
2-Chloroethylvinyl ether	EPA 624 EPA 8260B
Bromochloromethane	EPA 8260B
Bromodichloromethane	EPA 624 EPA 8260B
Bromoform	EPA 624 EPA 8260B
Bromomethane	EPA 624 EPA 8260B
Carbon tetrachloride	EPA 624 EPA 8260B

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**Volatile Halocarbons**

Chloroethane	EPA 624
	EPA 8260B
Chloroform	EPA 624
	EPA 8260B
Chloromethane	EPA 624
	EPA 8260B
cis-1,2-Dichloroethene	EPA 624
	EPA 8260B
cis-1,3-Dichloropropene	EPA 624
	EPA 8260B
Dibromochloromethane	EPA 624
	EPA 8260B
Dibromomethane	EPA 8260B
Dichlorodifluoromethane	EPA 624
	EPA 8260B
Hexachlorobutadiene, Volatile	EPA 8260B
Methylene chloride	EPA 624
	EPA 8260B
Tetrachloroethene	EPA 624
	EPA 8260B
trans-1,2-Dichloroethene	EPA 624
	EPA 8260B
trans-1,3-Dichloropropene	EPA 624
	EPA 8260B
trans-1,4-Dichloro-2-butene	EPA 8260B

**Volatile Halocarbons**

Trichloroethene	EPA 624
	EPA 8260B
Trichlorofluoromethane	EPA 624
	EPA 8260B
Vinyl chloride	EPA 624
	EPA 8260B

**Volatiles Organics**

1,4-Dioxane	EPA 8260B
2-Butanone (Methylethyl ketone)	EPA 8260B
2-Hexanone	EPA 8260B
4-Methyl-2-Pentanone	EPA 8260B
Acetone	EPA 8260B
Carbon Disulfide	EPA 8260B
Cyclohexane	EPA 8260B
Methyl acetate	EPA 8260B
Methyl cyclohexane	EPA 8260B
Vinyl acetate	EPA 8260B

**Wastewater Metals I**

Barium, Total	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010B
	EPA 6010C
	EPA 6020
	EPA 6020A
Cadmium, Total	EPA 200.7 Rev. 4.4

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**Wastewater Metals I**

**Wastewater Metals I**

Cadmium, Total

EPA 200.8 Rev. 5.4

Lead, Total

EPA 6010B

EPA 6010B

EPA 6010C

EPA 6010C

EPA 6020

EPA 6020

EPA 6020A

EPA 6020A

Magnesium, Total

EPA 200.7 Rev. 4.4

Calcium, Total

EPA 200.7 Rev. 4.4

EPA 6010B

EPA 6010B

EPA 6010C

EPA 6010C

Manganese, Total

EPA 200.7 Rev. 4.4

Chromium, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

EPA 200.8 Rev. 5.4

EPA 6010B

EPA 6010B

EPA 6010C

EPA 6010C

EPA 6020

EPA 6020

EPA 6020A

EPA 6020A

Nickel, Total

EPA 200.7 Rev. 4.4

Copper, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

EPA 200.8 Rev. 5.4

EPA 6010B

EPA 6010B

EPA 6010C

EPA 6010C

EPA 6020

EPA 6020

EPA 6020A

EPA 6020A

Potassium, Total

EPA 200.7 Rev. 4.4

Iron, Total

EPA 200.7 Rev. 4.4

EPA 6010B

EPA 6010B

EPA 6010C

EPA 6010C

Silver, Total

EPA 200.7 Rev. 4.4

Lead, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

EPA 200.8 Rev. 5.4

EPA 6010B

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NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2013  
Issued April 1, 2012

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

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

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

NY Lab Id No: 11148

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

**Wastewater Metals I**

Silver, Total	EPA 6010C
	EPA 6020
	EPA 6020A
Sodium, Total	EPA 200.7 Rev. 4.4
	EPA 6010B
	EPA 6010C

**Wastewater Metals II**

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

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

**Wastewater Metals II**

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

**Chromium VI**

Mercury, Total	EPA 245.1 Rev. 3.0
	EPA 245.2 Rev. 1974
	EPA 7470A

**Selenium, Total**

	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010B
	EPA 6010C

**Vanadium, Total**

	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4
	EPA 6010B
	EPA 6010C

**Zinc, Total**

	EPA 200.7 Rev. 4.4
	EPA 200.8 Rev. 5.4

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**Wastewater Metals II**

Zinc, Total

EPA 6010B

EPA 6010C

EPA 6020

EPA 6020A

**Wastewater Metals III**

Cobalt, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

EPA 6010B

EPA 6010C

EPA 6020

EPA 6020A

Molybdenum, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

EPA 6010B

EPA 6010C

EPA 6020

EPA 6020A

Thallium, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

EPA 6010B

EPA 6010C

EPA 6020

EPA 6020A

Tin, Total

EPA 200.7 Rev. 4.4

EPA 6010B

**Wastewater Metals III**

Tin, Total

EPA 6010C

Titanium, Total

EPA 200.7 Rev. 4.4

**Wastewater Miscellaneous**

Boron, Total

EPA 200.7 Rev. 4.4

EPA 6010B

Bromide

EPA 300.0 Rev. 2.1

Color

SM 18-21.2120B (01)

Cyanide, Total

LACHAT 10-204-00-1-A

SM 18-21.4500-CN E (99)

Oil & Grease Total Recoverable (HEM)

EPA 1664A

Organic Carbon, Total

SM 18-21.5310C (00)

Phenols

EPA 420.1 Rev. 1978

SM 14.510C

Silica, Dissolved

EPA 200.7 Rev. 4.4

Specific Conductance

EPA 120.1 Rev. 1982

SM 18-21.2510B (97)

Sulfide (as S)

SM 18-21.4500-S D (00)

Surfactant (MBAS)

SM 18-21.5540C (00)

Total Petroleum Hydrocarbons

EPA 1664A

**Sample Preparation Methods**

EPA 3005A

EPA 3015

EPA 3510C

EPA 5030B

EPA 9010B

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**ENVIRONMENTAL ANALYSES NON POTABLE WATER**

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**Sample Preparation Methods**

EPA 9030B

SM 18-20 4500-CN C

SM 18-21 4500-NH3 B (97)

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**ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE**

All approved analytes are listed below:

Acrylates		Characteristic Testing	
Acrolein (Propenal)	EPA 8260B	Ignitability	EPA 1010
Acrylonitrile	EPA 8260B		EPA 1030
Ethyl methacrylate	EPA 8260B	Chlorinated Hydrocarbon Pesticides	
Amines		4,4'-DDD	EPA 8081A
	1,2-Diphenylhydrazine		EPA 8081B
		4,4'-DDE	EPA 8081A
	2-Nitroaniline		EPA 8081B
		4,4'-DDT	EPA 8081A
	3-Nitroaniline		EPA 8081B
		Aldrin	EPA 8081A
	4-Chloroaniline		EPA 8081B
		alpha-BHC	EPA 8081A
	4-Nitroaniline		EPA 8081B
Benzidines		alpha-Chlordane	EPA 8081A
	Aniline		EPA 8081B
	Carbazole	Atrazine	EPA 8270C
			EPA 8270D
		beta-BHC	EPA 8081A
	3,3'-Dichlorobenzidine		EPA 8081B
		Chlordane Total	EPA 8081A
			EPA 8081B
	Benzidine	delta-BHC	EPA 8081A
			EPA 8081B
Characteristic Testing		Dieldrin	EPA 8081A
Corrosivity	EPA 9040B		EPA 8081B
	EPA 9045C		EPA 8081B

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**Chlorinated Hydrocarbon Pesticides**

Endosulfan I	EPA 8081A
	EPA 8081B
Endosulfan II	EPA 8081A
	EPA 8081B
Endosulfan sulfate	EPA 8081A
	EPA 8081B
Endrin	EPA 8081A
	EPA 8081B
Endrin aldehyde	EPA 8081A
	EPA 8081B
Endrin-Ketone	EPA 8081A
	EPA 8081B
gamma-Chlordane	EPA 8081A
	EPA 8081B
Heptachlor	EPA 8081A
	EPA 8081B
Heptachlor epoxide	EPA 8081A
	EPA 8081B
Lindane	EPA 8081A
	EPA 8081B
Methoxychlor	EPA 8081A
	EPA 8081B
Toxaphene	EPA 8081A
	EPA 8081B

**Chlorinated Hydrocarbons**

1,2,4,5-Tetrachlorobenzene	EPA 8270C
	EPA 8270D
1,2,4-Trichlorobenzene	EPA 8270C
	EPA 8270D
2-Chloronaphthalene	EPA 8270C
	EPA 8270D
Hexachlorobenzene	EPA 8270C
	EPA 8270D
Hexachlorobutadiene	EPA 8270C
	EPA 8270D
Hexachlorocyclopentadiene	EPA 8270C
	EPA 8270D
Hexachloroethane	EPA 8270C
	EPA 8270D

**Chlorophenoxy Acid Pesticides**

2,4,5-T	EPA 8151A
2,4,5-TP (Silvex)	EPA 8151A
2,4-D	EPA 8151A
Dicamba	EPA 8151A

**Haloethers**

4-Bromophenylphenyl ether	EPA 8270C
	EPA 8270D
4-Chlorophenylphenyl ether	EPA 8270C
	EPA 8270D
Bis (2-chloroisopropyl) ether	EPA 8270C

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**Haloethers**

Bis (2-chloroisopropyl) ether	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 8270C
	EPA 8270D
Bis(2-chloroethyl)ether	EPA 8270C
	EPA 8270D

**Low Level Polynuclear Aromatic Hydrocarbons**

Benzo(a)anthracene	EPA 8270C SIM
	EPA 8270D SIM
Benzo(a)pyrene	EPA 8270C SIM
	EPA 8270D SIM
Benzo(b)fluoranthene	EPA 8270C SIM
	EPA 8270D SIM
Benzo(k)fluoranthene	EPA 8270C SIM
	EPA 8270D SIM
Dibenzo(a,h)anthracene	EPA 8270C SIM
	EPA 8270D SIM
Indeno(1,2,3-cd)pyrene	EPA 8270C SIM
	EPA 8270D SIM

**Metals I**

Barium, Total	EPA 6010B
	EPA 6010C
Cadmium, Total	EPA 6010B
	EPA 6010C
Calcium, Total	EPA 6010B
	EPA 6010C

**Metals I**

Chromium, Total	EPA 6010B
	EPA 6010C
Copper, Total	EPA 6010B
	EPA 6010C
Iron, Total	EPA 6010B
	EPA 6010C
Lead, Total	EPA 6010B
	EPA 6010C
Magnesium, Total	EPA 6010B
	EPA 6010C
Manganese, Total	EPA 6010B
	EPA 6010C
Nickel, Total	EPA 6010B
	EPA 6010C
Potassium, Total	EPA 6010B
	EPA 6010C
Silver, Total	EPA 6010B
	EPA 6010C
Sodium, Total	EPA 6010B
	EPA 6010C

**Metals II**

Aluminum, Total	EPA 6010B
	EPA 6010C
Antimony, Total	EPA 6010B
	EPA 6010C

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**Metals II**

Arsenic, Total	EPA 6010B
	EPA 6010C
Beryllium, Total	EPA 6010B
	EPA 6010C
Chromium VI	EPA 7196A
Mercury, Total	EPA 7471A
	EPA 7471B
Selenium, Total	EPA 6010B
	EPA 6010C
Vanadium, Total	EPA 6010B
	EPA 6010C
Zinc, Total	EPA 6010B
	EPA 6010C

**Metals III**

Cobalt, Total	EPA 6010B
	EPA 6010C
Molybdenum, Total	EPA 6010B
	EPA 6010C
Thallium, Total	EPA 6010B
	EPA 6010C
Tin, Total	EPA 6010B
	EPA 6010C

**Miscellaneous**

Boron, Total	EPA 6010B
	EPA 6010C

**Miscellaneous**

Cyanide, Total	EPA 9012A
	EPA 9014
Phenols	EPA 9065
Specific Conductance	EPA 9050A

**Nitroaromatics and Isophorone**

1,3,5-Trinitrobenzene	EPA 8330
1,3-Dinitrobenzene	EPA 8330
2,4,6-Trinitrotoluene	EPA 8330
2,4-Dinitrotoluene	EPA 8270C
	EPA 8270D
	EPA 8330
2,6-Dinitrotoluene	EPA 8270C
	EPA 8270D
	EPA 8330
2-Amino-4,6-dinitrotoluene	EPA 8330
2-Nitrotoluene	EPA 8330
3-Nitrotoluene	EPA 8330
4-Amino-2,6-dinitrotoluene	EPA 8330
4-Nitrotoluene	EPA 8330
Hexahydro-1,3,5-trinitro-1,3,5-triazine	EPA 8330
Isophorone	EPA 8270C
	EPA 8270D
Methyl-2,4,6-trinitrophenylnitramine	EPA 8330
Nitrobenzene	EPA 8270C
	EPA 8270D

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**Nitroaromatics and Isophorone**

Nitrobenzene	EPA 8330
Octahydro-tetranitro-tetrazocine	EPA 8330
Pyridine	EPA 8270C
	EPA 8270D

**Nitrosoamines**

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

**Petroleum Hydrocarbons**

Diesel Range Organics	EPA 8015 B
	EPA 8015C
Gasoline Range Organics	EPA 8015 B
	EPA 8015C

**Phthalate Esters**

Benzyl butyl phthalate	EPA 8270C
	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 8270C
	EPA 8270D
Diethyl phthalate	EPA 8270C
	EPA 8270D
Dimethyl phthalate	EPA 8270C

**Phthalate Esters**

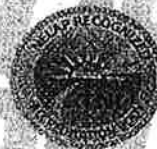
Dimethyl phthalate	EPA 8270D
Di-n-butyl phthalate	EPA 8270C
	EPA 8270D
Di-n-octyl phthalate	EPA 8270C
	EPA 8270D

**Polychlorinated Biphenyls**

PCB-1016	EPA 8082
	EPA 8082A
PCB-1221	EPA 8082
	EPA 8082A
PCB-1232	EPA 8082
	EPA 8082A
PCB-1242	EPA 8082
	EPA 8082A
PCB-1248	EPA 8082
	EPA 8082A
PCB-1254	EPA 8082
	EPA 8082A
PCB-1260	EPA 8082
	EPA 8082A
PCB-1262	EPA 8082
	EPA 8082A
PCB-1268	EPA 8082
	EPA 8082A

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**Polynuclear Aromatic Hydrocarbons**

Acenaphthene	EPA 8270C
	EPA 8270D
Acenaphthylene	EPA 8270C
	EPA 8270D
Anthracene	EPA 8270C
	EPA 8270D
Benzo(a)anthracene	EPA 8270C
	EPA 8270D
Benzo(a)pyrene	EPA 8270C
	EPA 8270D
Benzo(b)fluoranthene	EPA 8270C
	EPA 8270D
Benzo(ghi)perylene	EPA 8270C
	EPA 8270D
Benzo(k)fluoranthene	EPA 8270C
	EPA 8270D
Chrysene	EPA 8270C
	EPA 8270D
Dibenzo(a,h)anthracene	EPA 8270C
	EPA 8270D
Fluoranthene	EPA 8270C
	EPA 8270D
Fluorene	EPA 8270C
	EPA 8270D
Indeno(1,2,3-cd)pyrene	EPA 8270C

**Polynuclear Aromatic Hydrocarbons**

Indeno(1,2,3-cd)pyrene	EPA 8270D
Naphthalene	EPA 8270C
	EPA 8270D
Phenanthrene	EPA 8270C
	EPA 8270D
Pyrene	EPA 8270C
	EPA 8270D

**Priority Pollutant Phenols**

2,4,5-Trichlorophenol	EPA 8270C
	EPA 8270D
2,4,6-Trichlorophenol	EPA 8270C
	EPA 8270D
2,4-Dichlorophenol	EPA 8270C
	EPA 8270D
2,4-Dimethylphenol	EPA 8270C
	EPA 8270D
2,4-Dinitrophenol	EPA 8270C
	EPA 8270D
2-Chlorophenol	EPA 8270C
	EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 8270C
	EPA 8270D
2-Methylphenol	EPA 8270C
	EPA 8270D
2-Nitrophenol	EPA 8270C

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**Priority Pollutant Phenols**

2-Nitrophenol	EPA 8270D
3-Methylphenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 8270C
	EPA 8270D
4-Methylphenol	EPA 8270C
	EPA 8270D
4-Nitrophenol	EPA 8270C
	EPA 8270D
Pentachlorophenol	EPA 8270C
	EPA 8270D
Phenol	EPA 8270C
	EPA 8270D

**Semi-Volatile Organics**

Benzaldehyde	EPA 8270C
	EPA 8270D
Benzoic Acid	EPA 8270C
	EPA 8270D
Benzyl alcohol	EPA 8270C
	EPA 8270D
Caprolactam	EPA 8270C
	EPA 8270D
Dibenzofuran	EPA 8270C
	EPA 8270D
Isosafrole	EPA 8270D

**Semi-Volatile Organics**

1,1'-Biphenyl	EPA 8270C
	EPA 8270D
1,2-Dichlorobenzene, Semi-volatile	EPA 8270C
	EPA 8270D
1,3-Dichlorobenzene, Semi-volatile	EPA 8270C
	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270C
	EPA 8270D
2-Methylnaphthalene	EPA 8270C
	EPA 8270D
Acetophenone	EPA 8270C
	EPA 8270D

**Volatile Aromatics**

1,2,4-Trichlorobenzene, Volatile	EPA 8260B
1,2,4-Trimethylbenzene	EPA 8260B
1,2-Dichlorobenzene	EPA 8260B
1,3,5-Trimethylbenzene	EPA 8260B
1,3-Dichlorobenzene	EPA 8260B
1,4-Dichlorobenzene	EPA 8260B
2-Chlorotoluene	EPA 8260B
4-Chlorotoluene	EPA 8260B
Benzene	EPA 8260B
Bromobenzene	EPA 8260B
Chlorobenzene	EPA 8260B
Ethyl benzene	EPA 8260B
Isopropylbenzene	EPA 8260B

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WADSWORTH CENTER



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Issued April 1, 2012

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

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

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

NY Lab Id No: 11148

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

**Volatile Aromatics**

Naphthalene, Volatile	EPA 8260B
n-Butylbenzene	EPA 8260B
n-Propylbenzene	EPA 8260B
p-Isopropyltoluene (P-Cymene)	EPA 8260B
sec-Butylbenzene	EPA 8260B
Styrene	EPA 8260B
tert-Butylbenzene	EPA 8260B
Toluene	EPA 8260B
Total Xylenes	EPA 8260B

**Volatile Halocarbons**

1,1,1-Trichloroethane	EPA 8260B
1,1,2,2-Tetrachloroethane	EPA 8260B
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 8260B
1,1,2-Trichloroethane	EPA 8260B
1,1-Dichloroethane	EPA 8260B
1,1-Dichloroethene	EPA 8260B
1,1-Dichloropropene	EPA 8260B
1,2,3-Trichloropropane	EPA 8260B
1,2-Dibromo-3-chloropropane	EPA 8260B
1,2-Dibromoethane	EPA 8260B
1,2-Dichloroethane	EPA 8260B
1,2-Dichloropropane	EPA 8260B
1,3-Dichloropropane	EPA 8260B
2,2-Dichloropropane	EPA 8260B
Bromochloromethane	EPA 8260B

**Volatile Halocarbons**

Bromodichloromethane	EPA 8260B
Bromoform	EPA 8260B
Bromomethane	EPA 8260B
Carbon tetrachloride	EPA 8260B
Chloroethane	EPA 8260B
Chloroform	EPA 8260B
Chloromethane	EPA 8260B
cis-1,2-Dichloroethene	EPA 8260B
cis-1,3-Dichloropropene	EPA 8260B
Dibromochloromethane	EPA 8260B
Dibromomethane	EPA 8260B
Dichlorodifluoromethane	EPA 8260B
Hexachlorobutadiene, Volatile	EPA 8260B
Methylene chloride	EPA 8260B
Tetrachloroethene	EPA 8260B
trans-1,2-Dichloroethene	EPA 8260B
trans-1,3-Dichloropropene	EPA 8260B
trans-1,4-Dichloro-2-butene	EPA 8260B
Trichloroethene	EPA 8260B
Trichlorofluoromethane	EPA 8260B
Vinyl chloride	EPA 8260B

**Volatile Organics**

1,4-Dioxane	EPA 8260B
2-Butanone (Methyl ethyl ketone)	EPA 8260B
2-Hexanone	EPA 8260B

Serial No.: 46277

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NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



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**Volatile Organics**

4-Methyl-2-Pentanone	EPA 8260B
Acetone	EPA 8260B
Carbon Disulfide	EPA 8260B
Cyclohexane	EPA 8260B
Methyl acetate	EPA 8260B
Methyl cyclohexane	EPA 8260B
Methyl tert-butyl ether	EPA 8260B
tert-butyl alcohol	EPA 8260B
Vinyl acetate	EPA 8260B

**Sample Preparation Methods**

EPA 1311  
EPA 1312  
EPA 3005A  
EPA 3050B  
EPA 3540C  
EPA 3546  
EPA 3580  
EPA 3580A  
EPA 5030B  
EPA 5035  
EPA 9010B  
EPA 9030B

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