

December 17, 2019

Discovery Charter School  
4700 Parkside Avenue  
Philadelphia, PA 19131

**Subject: Total Lead Testing – Drinking Water Fountains  
Discovery Charter School  
4700 Parkside Ave, Philadelphia, Pennsylvania**

Dear Administrator:

Urban Engineers, Inc. (Urban) is pleased to submit this total lead in drinking water analysis letter report for the Discovery Charter School, located on 4700 Parkside Ave, Philadelphia, Pennsylvania (Please refer to Attachment A for a site location map). Urban performed the lead in water sampling on December 6, 2019. The sampling consisted of collecting 12 drinking water samples from water fountains located throughout the school complex.

#### **SITE ACTIVITIES AND METHODOLOGY**

Urban personnel arrived on site at approximately 10:45 AM to meet school maintenance personnel, who then escorted the Urban employee to each water fountain. 6 double-water fountains were tested throughout the building, for a total of 12 samples. First-draw samples were collected in 250 milliliter wide-mouth, sterile, laboratory-approved jars. Nitrile gloves were worn while sampling, which were changed and discarded after each water sample. Samples were then submitted to Pace Analytical for total lead analyses, EPA Method 200.8.

#### **RESULTS**

A laboratory report was provided to Urban outlining the analytical results of the lead testing. Table 1 provides a summary of the results from each water fountain. The complete lab report is provided in Attachment B.

**TABLE 1: TOTAL LEAD CONCENTRATION**

<b>Sample Name</b>	<b>Floor - Room</b>	<b>Result (ppb)</b>
DISCOVERY – 1A	1 <sup>st</sup> – 403	<1.00 (ND*)
DISCOVERY – 1B	1 <sup>st</sup> - 403	<1.00 (ND)
DISCOVERY – 2A	1 <sup>st</sup> – Bathrooms	0.420
DISCOVERY – 2B	1 <sup>st</sup> – Bathrooms	<1.00 (ND)
DISCOVERY – 3A	1 <sup>st</sup> – 202	<1.00 (ND)
DISCOVERY – 3B	1 <sup>st</sup> - 202	<1.00 (ND)
DISCOVERY – 4A	1 <sup>st</sup> – Boys Locker Room	<1.00 (ND)
DISCOVERY – 4B	1 <sup>st</sup> – Boys Locker Room	<1.00 (ND)
DISCOVERY – 5A	2 <sup>nd</sup> – 701	<1.00 (ND)
DISCOVERY – 5B	2 <sup>nd</sup> - 701	<1.00 (ND)
DISCOVERY – 6A	2 <sup>nd</sup> – Bathrooms	<1.00 (ND)
DISCOVERY – 6B	2 <sup>nd</sup> – Bathrooms	<1.00 (ND)

\* ND: non-detectable, as result was below the laboratory reporting limit

## STANDARDS TO COMPARE

**Environmental Protection Agency (EPA)** - In 1974, Congress passed the Safe Drinking Water Act. This law requires EPA to determine the level of contaminants in drinking water at which no adverse health effects are likely to occur with an adequate margin of safety. These non-enforceable health goals, based solely on possible health risks are called maximum contaminant level goals (MCLGs). The MCLG for lead is zero. EPA has set this level based on the best available science which shows there is no safe level of exposure to lead.

For most contaminants, EPA sets an enforceable regulation called a maximum contaminant level (MCL) based on the MCLG. MCLs are set as close to the MCLGs as possible, considering cost, benefits and the ability of public water systems to detect and remove contaminants using suitable treatment technologies.

However, because lead contamination of drinking water often results from corrosion of the plumbing materials belonging to water system customers, EPA established a treatment technique rather than an MCL for lead. A treatment technique is an enforceable procedure or level of technological performance which water systems must follow to ensure control of a contaminant.

The treatment technique regulation for lead (referred to as the “Lead and Copper Rule”) requires water systems to control the corrosivity of the water. The regulation also requires systems to collect tap samples from sites served by the system that are more likely to have plumbing materials containing lead. If more than 10 percent of tap water samples exceed the lead action level of 15 parts per billion (ppb), then water systems are required to take additional actions (<https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water#regs>).

**There were no samples that exceeded the EPA lead action level of 15 ppb.**

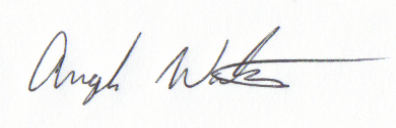
**City of Philadelphia** - The City of Philadelphia Ordinance - Section A-703.1 of Title 4 of the Philadelphia Code, titled “Special Certificate of Inspection”, states that lead in drinking water from a fountain or sink must not exceed 10 ppb.

**There were no samples that exceeded the City of Philadelphia action level of 10 ppb.**

Should you have any questions regarding this report, please feel free to contact me at [ajwaters@urbanengineers.com](mailto:ajwaters@urbanengineers.com) or extension 1273.

Sincerely,

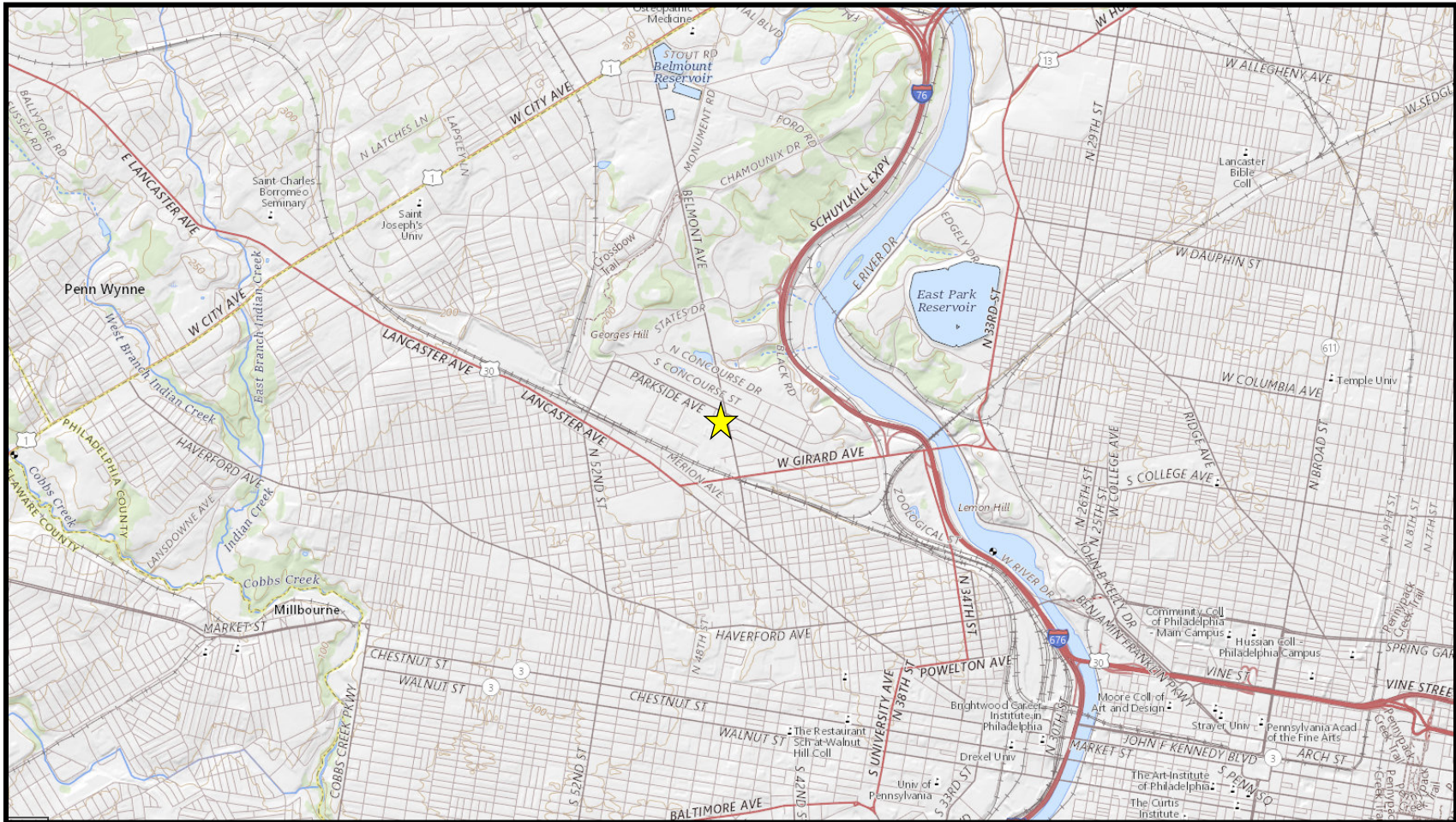
**URBAN ENGINEERS, INC.**

A handwritten signature in black ink, appearing to read "Angelo J. Waters", is written over a light gray rectangular background.

Angelo J. Waters, PE, LEED AP  
Practice Leader, Environmental Services

Attachments:


- Attachment A: Site Location Map
- Attachment B: Analytical Results



Source: PennDOT GIS

**Attachment A: USGS SITE LOCATION MAP**  
**Discovery Charter School**  
**4700 Parkside Ave**  
**Philadelphia, Pennsylvania**



 Approximate Site Location



# ANALYTICAL REPORT

December 16, 2019

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Urban Engineers

Sample Delivery Group: L1168552  
Samples Received: 12/07/2019  
Project Number:  
Description: Discovery Charter School  
  
Report To: Mr. Angelo Waters  
530 Walnut Street  
Philadelphia, PA 19106

Entire Report Reviewed By:












Jennifer Huckaba  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





<b>Cp: Cover Page</b>	<b>1</b>	
<b>Tc: Table of Contents</b>	<b>2</b>	
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DISCOVERY-3B L1168552-06	11	
DISCOVERY-4A L1168552-07	12	
DISCOVERY-4B L1168552-08	13	
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# SAMPLE SUMMARY



## DISCOVERY-1A L1168552-01 DW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 200.8	WG1393415	1	12/12/19 11:25	12/12/19 14:27	TM	Mt. Juliet, TN

Collected by Tyler Short  
 Collected date/time 12/06/19 10:44  
 Received date/time 12/07/19 08:15

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## DISCOVERY-1B L1168552-02 DW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 200.8	WG1393415	1	12/12/19 11:25	12/12/19 14:31	TM	Mt. Juliet, TN

Collected by Tyler Short  
 Collected date/time 12/06/19 10:44  
 Received date/time 12/07/19 08:15

## DISCOVERY-2A L1168552-03 DW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 200.8	WG1394594	1	12/12/19 11:46	12/12/19 13:36	JPD	Mt. Juliet, TN

Collected by Tyler Short  
 Collected date/time 12/06/19 10:50  
 Received date/time 12/07/19 08:15

## DISCOVERY-2B L1168552-04 DW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 200.8	WG1394594	1	12/12/19 11:46	12/12/19 13:39	JPD	Mt. Juliet, TN

Collected by Tyler Short  
 Collected date/time 12/06/19 10:50  
 Received date/time 12/07/19 08:15

## DISCOVERY-3A L1168552-05 DW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 200.8	WG1394594	1	12/12/19 11:46	12/12/19 13:43	JPD	Mt. Juliet, TN

Collected by Tyler Short  
 Collected date/time 12/06/19 10:55  
 Received date/time 12/07/19 08:15

## DISCOVERY-3B L1168552-06 DW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 200.8	WG1394594	1	12/12/19 11:46	12/12/19 13:46	JPD	Mt. Juliet, TN

Collected by Tyler Short  
 Collected date/time 12/06/19 10:55  
 Received date/time 12/07/19 08:15

## DISCOVERY-4A L1168552-07 DW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 200.8	WG1394594	1	12/12/19 11:46	12/12/19 13:49	JPD	Mt. Juliet, TN

Collected by Tyler Short  
 Collected date/time 12/06/19 11:00  
 Received date/time 12/07/19 08:15

## DISCOVERY-4B L1168552-08 DW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 200.8	WG1394594	1	12/12/19 11:46	12/12/19 14:06	JPD	Mt. Juliet, TN

Collected by Tyler Short  
 Collected date/time 12/06/19 11:00  
 Received date/time 12/07/19 08:15

# SAMPLE SUMMARY



## DISCOVERY-5A L1168552-09 DW

Collected by: Tyler Short  
 Collected date/time: 12/06/19 11:05  
 Received date/time: 12/07/19 08:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 200.8	WG1394594	1	12/12/19 11:46	12/12/19 14:09	JPD	Mt. Juliet, TN

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

## DISCOVERY-5B L1168552-10 DW

Collected by: Tyler Short  
 Collected date/time: 12/06/19 11:05  
 Received date/time: 12/07/19 08:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 200.8	WG1394594	1	12/12/19 11:46	12/12/19 14:12	JPD	Mt. Juliet, TN

<sup>4</sup> Cn

<sup>5</sup> Sr

## DISCOVERY-6A L1168552-11 DW

Collected by: Tyler Short  
 Collected date/time: 12/06/19 11:07  
 Received date/time: 12/07/19 08:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 200.8	WG1394594	1	12/12/19 11:46	12/12/19 14:16	JPD	Mt. Juliet, TN

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

## DISCOVERY-6B L1168552-12 DW

Collected by: Tyler Short  
 Collected date/time: 12/06/19 11:07  
 Received date/time: 12/07/19 08:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 200.8	WG1394597	1	12/15/19 07:30	12/15/19 21:28	LD	Mt. Juliet, TN

<sup>9</sup> Sc





All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jennifer Huckaba  
Project Manager

- <sup>1</sup> Cp
- <sup>2</sup> Tc
- <sup>3</sup> Ss
- <sup>4</sup> Cn
- <sup>5</sup> Sr
- <sup>6</sup> Qc
- <sup>7</sup> Gl
- <sup>8</sup> Al
- <sup>9</sup> Sc



Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Lead	U		0.260	1.00	1	12/12/2019 14:27	<a href="#">WG1393415</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Lead	U		0.260	1.00	1	12/12/2019 14:31	<a href="#">WG1393415</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Lead	0.420	J	0.260	1.00	1	12/12/2019 13:36	<a href="#">WG1394594</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Lead	U		0.260	1.00	1	12/12/2019 13:39	<a href="#">WG1394594</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Lead	U		0.260	1.00	1	12/12/2019 13:43	<a href="#">WG1394594</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Lead	U		0.260	1.00	1	12/12/2019 13:46	<a href="#">WG1394594</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Lead	U		0.260	1.00	1	12/12/2019 13:49	<a href="#">WG1394594</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Lead	U		0.260	1.00	1	12/12/2019 14:06	<a href="#">WG1394594</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Lead	U		0.260	1.00	1	12/12/2019 14:09	<a href="#">WG1394594</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Lead	U		0.260	1.00	1	12/12/2019 14:12	<a href="#">WG1394594</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Lead	U		0.260	1.00	1	12/12/2019 14:16	<a href="#">WG1394594</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Metals (ICPMS) by Method 200.8

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Lead	U		0.260	1.00	1	12/15/2019 21:28	<a href="#">WG1394597</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3481789-1 12/12/19 13:23

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Lead	U		0.260	1.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Laboratory Control Sample (LCS)

(LCS) R3481789-2 12/12/19 13:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	50.0	49.3	98.5	85.0-115	

<sup>4</sup>Cn

<sup>5</sup>Sr

L1167477-75 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1167477-75 12/12/19 13:30 • (MS) R3481789-3 12/12/19 13:33 • (MSD) R3481789-4 12/12/19 13:36

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	50.0	ND	48.9	51.7	97.0	103	1	70.0-130			5.58	20

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



Method Blank (MB)

(MB) R3481767-1 12/12/19 13:19

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Lead	U		0.260	1.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

Laboratory Control Sample (LCS)

(LCS) R3481767-2 12/12/19 13:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	50.0	49.2	98.3	85.0-115	

<sup>6</sup>Qc

L1167477-32 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1167477-32 12/12/19 13:26 • (MS) R3481767-3 12/12/19 13:29 • (MSD) R3481767-4 12/12/19 13:33

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	50.0	ND	46.2	53.1	92.3	106	1	70.0-130			14.0	20

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc





Method Blank (MB)

(MB) R3482551-1 12/15/19 21:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Lead	U		0.260	1.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Laboratory Control Sample (LCS)

(LCS) R3482551-2 12/15/19 21:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Lead	50.0	43.3	86.5	85.0-115	

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

L1167702-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1167702-01 12/15/19 21:18 • (MS) R3482551-3 12/15/19 21:21 • (MSD) R3482551-4 12/15/19 21:25

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Lead	50.0	ND	44.5	43.9	89.1	87.8	1	70.0-130			1.48	20

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
---	-------------------------------------------------------------------------------------



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.  
 \* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

## State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

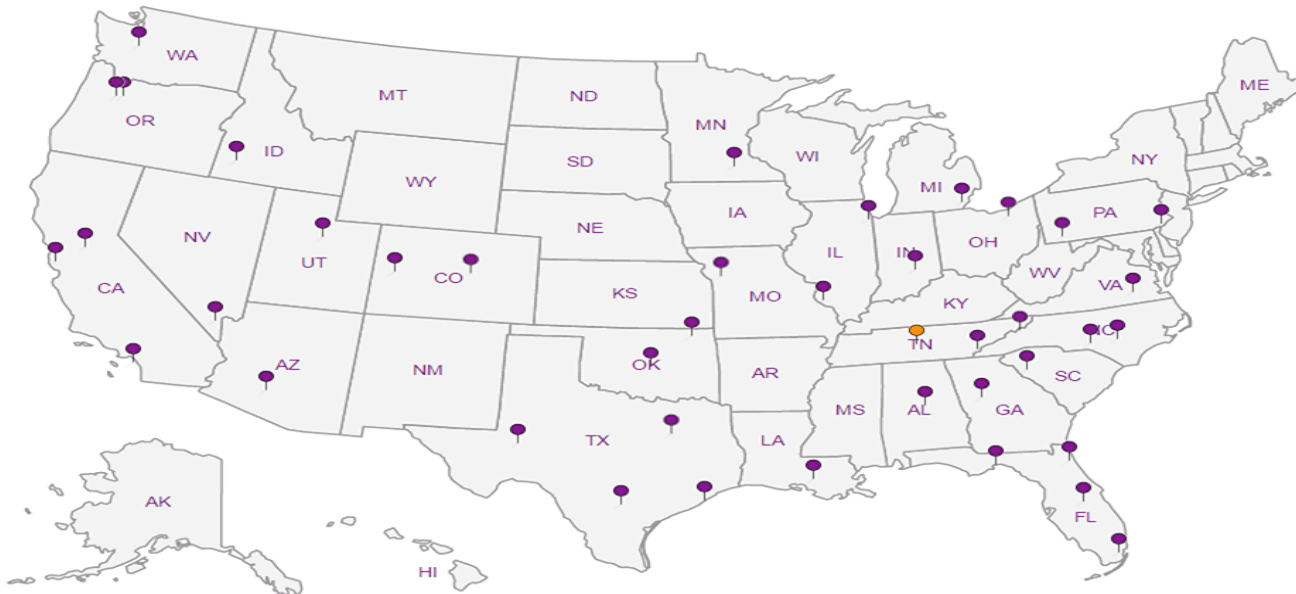
## Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

## Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

URBAN ENGINEERS, INC  
520 WALNUT ST  
PHILADELPHIA, PA

Billing Information:

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 2



YOUR LAB OF CHOICE

12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-5858  
Phone: 800-767-5859  
Fax: 615-758-5859



Report to:  
ANDREW WATERS

Email To:  
a.waters@urbanengineers.com

Project Description: DISCOVERY CHARTER SEWAGE

City/State Collected: PHILADELPHIA PA

Phone: 215 982 8081  
Fax:

Client Project #

Lab Project #

Collected by (print):  
TYLER SHULTZ

Site/Facility ID #

P.O. #

Collected by (signature):  
*[Signature]*

Rush? (Lab MUST Be Notified)

Quote #

Immediately Packed on Ice N 1 Y    

Same Day Five Day  
Next Day 5 Day (Rad Only)  
Two Day 10 Day (Rad Only)  
Three Day

Date Results Needed

STANDARD

No. of Cntrs

TOTAL LEAD

L# L1168552

C112

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
DISCOVERY-1A	G	DW	MA	12/6	10:44	1 X
DISCOVERY-1B				12/6	10:44	1 X
DISCOVERY-2A				12/6	10:50	1 X
DISCOVERY-2B				12/6	10:50	1 X
DISCOVERY-3A				12/6	10:55	1 X
DISCOVERY-3B				12/6	10:55	1 X
DISCOVERY-4A				12/6	11:00	1 X
DISCOVERY-4B				12/6	11:00	1 X
DISCOVERY-5A				12/6	11:05	1 X
DISCOVERY-5B				12/6	11:05	1 X

Remarks	Sample # (lab only)
	-01
	02
	03
	04
	05
	06
	07
	08
	09
	10

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks:

Samples returned via:  
UPS FedEx Courier *SWA*

Tracking #

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Sample Receipt Checklist

COC Seal Present/Intact:  Y  N  
COC Signed/Accurate:  Y  N  
Bottles arrive intact:  Y  N  
Correct bottles used:  Y  N  
Sufficient volume sent:  Y  N  
If Applicable  
VOA Zero Headspace:  Y  N  
Preservation Correct/Checked:  Y  N

RAD SCREEN: <0.5 mR/hr

Relinquished by: (Signature)  
*[Signature]*

Date: 12-6-19 Time: 14:00

Received by: (Signature)  
*[Signature]*

Trip Blank Received: Yes / No  
HCL / MeOH  
TBR

Relinquished by: (Signature)  
*[Signature]*

Date: 12-6-19 Time: 14:00

Received by: (Signature)  
*[Signature]*

Temp: °C Bottles Received: 12  
20.12.19

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: Time:

Received for lab by: (Signature)  
*[Signature]*

Date: 12-7-19 Time: 8:15

\*pH adjusted @ 1850

Hold: Condition: NCF / OK



URBAN ENGINEERS  
530 WALNUT ST

Billing Information:

11

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 2



YOUR LAB OF CHOICE

12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-5858  
Phone: 800-767-5859  
Fax: 615-758-5859



Report to:

MILCO WATERS

Email To:

m.waters@urban

Project Description: DISCOVERY CHARTER SPACE

City/State Collected: PHILADELPHIA PA

Phone:  
Fax:

Client Project #

Lab Project #

Collected by (print):

TREZ SHOT

Site/Facility ID #

P.O. #

Collected by (signature):

*[Signature]*

Rush? (Lab MUST Be Notified)

Quote #

Same Day Five Day  
Next Day 5 Day (Rad Only)  
Two Day 10 Day (Rad Only)  
Three Day

Date Results Needed

Immediately  
Packed on Ice N Y

No  
of  
Cntrs

TOTAL LEAD

L# L1168562

Table #

Acctnum:

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Remarks

Sample # (lab only)

- 11  
17

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs													
DISCOVERY-6A	G	DW	N/A	12/6	11:07	1	X												
DISCOVERY-6B	G	DW	N/A	12/6	11:07	1	X												

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks:

Samples returned via:

UPS FedEx Courier

*SWA*

Tracking #

pH Temp

Flow Other

Sample Receipt Checklist

COC Seal Present/Intact:  NP  Y  N  
COC Signed/Accurate:  Y  N  
Bottles arrive intact:  Y  N  
Correct bottles used:  Y  N  
Sufficient volume sent:  Y  N  
If Applicable  
VOA Zero Headspace:  Y  N  
Preservation Correct/Checked:  Y  N

RAD SCREEN: <0.5 mR/hr

Relinquished by: (Signature)

*[Signature]*

Date:

12/6/19

Time:

14:00

Received by: (Signature)

*[Signature]*

Trip Blank Received: Yes  No

HCL / MeOH  
TBR

Relinquished by: (Signature)

*[Signature]*

Date:

12/6/19

Time:

14:00

Received by: (Signature)

*[Signature]*

Temp: °C Bottles Received: 12

2.01 = 2.12

If preservation required by Login: Date/Time

\* PH adjusted @ 1850

Relinquished by: (Signature)

*[Signature]*

Date:

12-7-19

Time:

8:15

Received for lab by: (Signature)

*[Signature]*

Date: Time:

12-7-19 8:15

Hold:

Condition:  
NCF / OK