Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
516-370-6000

March 08, 2023

Scott Renneisen, PG
Terraphase Engineering
1100 East Hector Street
Suite 416
Conshohocken, PA 19428

RE: Project: P042.001
Pace Project No.: 70248410

Dear Scott Renneisen, PG:

Enclosed are the analytical results for sample(s) received by the laboratory on March 07, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Andrew J. Lynch
andrew.lynch@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: David Bishop, Terraphase Engineering
Joe Luchette, Terraphase Engineering
EDD Recipient, Terraphase Engineering

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CERTIFICATIONS

Project: P042.001
Pace Project No.: 70248410

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747
Connecticut Certification #: PH-0435
Delaware Certification # NY 10478
Maryland Certification #: 208
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987
New Jersey Certification #: NY158
New York Certification #: 10478 Primary Accrediting Body
Pennsylvania Certification #: 68-00350
Rhode Island Certification #: LAO00340
Virginia Certification # 460302

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SAMPLE SUMMARY

Project: P042.001
Pace Project No.: 70248410

Lab ID	Sample ID	Matrix	Date Collected	Date Received
70248410001	**1492**	Drinking Water	03/06/23 07:51	03/07/23 10:30
70248410002	**1493**	Drinking Water	03/06/23 07:58	03/07/23 10:30
70248410003	**1494**	Drinking Water	03/06/23 08:05	03/07/23 10:30
70248410004	**1495**	Drinking Water	03/06/23 08:07	03/07/23 10:30
70248410005	**1496**	Drinking Water	03/06/23 08:10	03/07/23 10:30
70248410006	**1497**	Drinking Water	03/06/23 08:15	03/07/23 10:30
70248410007	**1498**	Drinking Water	03/06/23 08:20	03/07/23 10:30
70248410008	**1499**	Drinking Water	03/06/23 08:25	03/07/23 10:30

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SAMPLE ANALYTE COUNT

Project: P042.001
Pace Project No.: 70248410

Lab ID	Sample ID	Method	Analysts	Analytes Reported
70248410001	**1492**	EPA 200.8	JJS	1
70248410002	**1493**	EPA 200.8	JJS	1
70248410003	**1494**	EPA 200.8	JJS	1
70248410004	**1495**	EPA 200.8	JJS	1
70248410005	**1496**	EPA 200.8	JJS	1
70248410006	**1497**	EPA 200.8	JJS	1
70248410007	**1498**	EPA 200.8	JJS	1
70248410008	**1499**	EPA 200.8	JJS	1

PACE-MV = Pace Analytical Services - Melville

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PROJECT NARRATIVE

Project: P042.001
Pace Project No.: 70248410

Method: **EPA 200.8**
Description: 200.8 MET ICPMS Drinking Water
Client: Terraphase Engineering
Date: March 08, 2023

General Information:
8 samples were analyzed for EPA 200.8 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: P042.001
Pace Project No.: 70248410

Sample: 1492 **Lab ID: 70248410001** Collected: 03/06/23 07:51 Received: 03/07/23 10:30 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville								
Lead	**7.0**	ug/L	1.0	0.10	1		03/08/23 16:11	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: P042.001
Pace Project No.: 70248410

Sample: 1493 **Lab ID: 70248410002** Collected: 03/06/23 07:58 Received: 03/07/23 10:30 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville								
Lead	ND	ug/L	1.0	0.10	1		03/08/23 16:13	7439-92-1	

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ANALYTICAL RESULTS

Project: P042.001
Pace Project No.: 70248410

Sample: 1494 **Lab ID: 70248410003** Collected: 03/06/23 08:05 Received: 03/07/23 10:30 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville								
Lead	ND	ug/L	1.0	0.10	1		03/08/23 16:20	7439-92-1	

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ANALYTICAL RESULTS

Project: P042.001
Pace Project No.: 70248410

Sample: 1495 **Lab ID: 70248410004** Collected: 03/06/23 08:07 Received: 03/07/23 10:30 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville								
Lead	ND	ug/L	1.0	0.10	1		03/08/23 16:25	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: P042.001
Pace Project No.: 70248410

Sample: 1496 **Lab ID: 70248410005** Collected: 03/06/23 08:10 Received: 03/07/23 10:30 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville								
Lead	ND	ug/L	1.0	0.10	1		03/08/23 16:26	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: P042.001
Pace Project No.: 70248410

Sample: 1497 **Lab ID: 70248410006** Collected: 03/06/23 08:15 Received: 03/07/23 10:30 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville								
Lead	ND	ug/L	1.0	0.10	1		03/08/23 16:28	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: P042.001
Pace Project No.: 70248410

Sample: 1498 **Lab ID: 70248410007** Collected: 03/06/23 08:20 Received: 03/07/23 10:30 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville								
Lead	ND	ug/L	1.0	0.10	1		03/08/23 16:30	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: P042.001
Pace Project No.: 70248410

Sample: 1499 **Lab ID: 70248410008** Collected: 03/06/23 08:25 Received: 03/07/23 10:30 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville								
Lead	ND	ug/L	1.0	0.10	1		03/08/23 16:31	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P042.001
Pace Project No.: 70248410

QC Batch: 296412
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET No Prep Drinking Water
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70248410001, 70248410002

METHOD BLANK: 1499822 Matrix: Water
Associated Lab Samples: 70248410001, 70248410002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lead	ug/L	ND	1.0	0.10	03/08/23 15:29	

LABORATORY CONTROL SAMPLE: 1499823

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	50	47.8	96	85-115	

MATRIX SPIKE SAMPLE: 1499825

Parameter	Units	70248376014 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	2.5	50	58.4	112	70-130	

MATRIX SPIKE SAMPLE: 1499827

Parameter	Units	70248376015 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	2.5	50	50.7	96	70-130	

SAMPLE DUPLICATE: 1499824

Parameter	Units	70248376014 Result	Dup Result	RPD	Max RPD	Qualifiers
Lead	ug/L	2.5	2.5	3	20	

SAMPLE DUPLICATE: 1499826

Parameter	Units	70248376015 Result	Dup Result	RPD	Max RPD	Qualifiers
Lead	ug/L	2.5	2.5	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: P042.001
Pace Project No.: 70248410

QC Batch: 296413
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET No Prep Drinking Water
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70248410003, 70248410004, 70248410005, 70248410006, 70248410007, 70248410008

METHOD BLANK: 1499828 Matrix: Water
Associated Lab Samples: 70248410003, 70248410004, 70248410005, 70248410006, 70248410007, 70248410008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lead	ug/L	ND	1.0	0.10	03/08/23 16:14	

LABORATORY CONTROL SAMPLE: 1499829

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	50	46.8	94	85-115	

MATRIX SPIKE SAMPLE: 1499831

Parameter	Units	70248410003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	ND	50	48.6	96	70-130	

SAMPLE DUPLICATE: 1499830

Parameter	Units	70248410003 Result	Dup Result	RPD	Max RPD	Qualifiers
Lead	ug/L	ND	.65J		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project:	P042.001
Pace Project No.:	70248410

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: P042.001
Pace Project No.: 70248410

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70248410001	**1492**	EPA 200.8	296412		
70248410002	**1493**	EPA 200.8	296412		
70248410003	**1494**	EPA 200.8	296413		
70248410004	**1495**	EPA 200.8	296413		
70248410005	**1496**	EPA 200.8	296413		
70248410006	**1497**	EPA 200.8	296413		
70248410007	**1498**	EPA 200.8	296413		
70248410008	**1499**	EPA 200.8	296413		

DO NOT RETURN YOUR SAMPLES WITHOUT FILLING OUT THE SAMPLER NAME, UNIQUE DATE AND TIME FOR EACH BOTTLE, and RELINQUISHED BY SECTION.

SHIP SAMPLES BACK TO LAB WITHIN 24 HOURS OF SAMPLE COLLECTION

Pace Analytical

terraphase engineering

CHAIN OF CUSTODY

WO# : 70248410

70248410

Project ID:	P042.001
Project Number:	PENNVEST
Purchase Order Number:	ID=620
School Name:	**Muhlenberg Elementary Center**
School Address:	610 Sharp Avenue Reading, Pennsylvania 19605
Waybill Number:	
Lab Destination:	
Lab Contact Name / ph. #:	

end Report To:	Terraphase Engineering
hone Number:	(215)297-3502
Email:	edd@terraphase.com
Address:	1100 East Hector Street, Suite 416
City:	Conshohocken, PA 19428

Sampler's Name(s):		Collection Information			Matrix	# of containers	LEAD EPA 200.8 Container Type: 250mL Bottle Preservative: none
Sample ID Numb	Sample Description	Date	Time	Method			
1492	Kitchen Faucet; MEC-1 (kitchen); Floor 1	3/6/23	7:57 AM	G	WP	1	X
1493	Water Cooler ; MEC-2 (near B129); Floor 1	3/6/23	7:58 AM	G	WP	1	X
1494	Water Cooler ; MEC-3 (near B131); Floor 1	3/6/23	8:05 AM	G	WP	1	X
1495	Water Cooler ; MEC-4 (near gym); Floor 1	3/6/23	8:07 AM	G	WP	1	X
1496	Water Cooler ; MEC-7 (near B108); Floor 1	3/6/23	8:10 AM	G	WP	1	X
1497	Water Cooler ; MEC-5 (near B121); Floor 1	3/6/23	8:15 AM	G	WP	1	X
1498	Water Cooler ; MEC-6 (near B217); Floor 2	3/6/23	8:20 AM	G	WP	1	X
1499	Water Cooler ; MEC-8 (near B207); Floor 2	3/6/23	8:25 AM	G	WP	1	X

Turnaround Time: Standard, 14 day

Level Of QC Required: II

Relinquished By: (sign here) [signature]	Date: 3/6/2023 Time: 11:00 a.m.	Received By: Ash (pace)	Date: 3/7/23 Time: 1030
Relinquished By:	Date: Time:	Received By:	Date: Time:
Relinquished By:	Date: Time:	Received By:	Date: Time:

Codes

WP = Drinking Water; G = Grab

Pace Analytical®

Sample Condition Upon Receipt

WO# : 70248410

PM: AJL Due Date: 03/21/23

CLIENT: TERRA

Client Name: Terra Phase Proje

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 6136 6136 0833

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals intact: ☐ Yes ☐ No ☑ N/A

Temperature Blank Present: ☐ Yes ☑ No

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ Ziploc ☐ None ☐ Other

Type of Ice: Wet Blue (None)

Thermometer Used: ~~TH091~~ H144 Correction Factor:

☐ Samples on ice, cooling process has begun

Cooler Temperature(°C): 9.8 Cooler Temperature Corrected(°C): 9.9

Date/Time 5035A kits placed in freezer

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☑ N/A, water sample)

Date and Initials of person examining contents: AS 3/7/23

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☐ No

Did samples orignate from a foreign source including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑ Yes	☐ No		1.
Chain of Custody Filled Out:	☑ Yes	☐ No		2.
Chain of Custody Relinquished:	☑ Yes	☐ No		3.
Sampler Name & Signature on COC:	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time:	☑ Yes	☐ No		5.
Short Hold Time Analysis (<72hr):	☐ Yes	☑ No		6.
Rush Turn Around Time Requested:	☐ Yes	☑ No		7.
Sufficient Volume: (Triple volume provided for I	☑ Yes	☐ No		8.
Correct Containers Used:	☑ Yes	☐ No		9.
-Pace Containers Used:	☑ Yes	☐ No		
Containers Intact:	☑ Yes	☐ No		10.
Filtered volume received for Dissolved tests	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	☑ Yes	☐ No		12.
-Includes date/time/ID/Matrix: SL (WT) OIL				
All containers needing preservation have been checked? pH paper Lot # HC293055	☑ Yes	☐ No	☐ N/A	13. ☑ HNO₃ ☐ H_2SO_4 ☐ NaOH ☐ HCl Sample # All
All containers needing preservation are found to be in compliance with method recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☐ Yes	☑ No	☐ N/A	Initial when completed: MS Lot # of added preservative: 171434 Date/Time preservative added: 3/7/23 1020
Samples checked for dechlorination: KI starch test strips Lot #. Residual chlorine strips Lot #	☐ Yes	☐ No	☑ N/A	14. Positive for Res. Chlorine? Y N
SM 4500 CN samples checked for sulfide? Lead Acetate Strips Lot #	☐ Yes	☐ No	☑ N/A	15. Positive for Sulfide? Y N
Headspace in VOA Vials (>6mm):	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Present:	☐ Yes	☐ No	☑ N/A	17.
Trip Blank Custody Seals Present	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.

ENV-FRM-MELV-0024 01