

August 4, 2021

Thomas M. Hanna, P.E., LEED AP
Capital Projects Manager
Central Bucks School District
320 West Swamp Road
Doylestown, PA 18901

**Re: Lead in Drinking Water Sample Collection and Reporting
Lenape Middle School
313 W State Street
Doylestown, PA 18901**

Dear Mr. Hanna:

This document has been prepared by Langan to provide the results of the drinking water sampling activities at the above referenced school. Langan sampled the drinking water sources (e.g. bottle fillers, fountains, sink faucets, etc.) on July 2, 2021 as identified by the Central Bucks School District facility inventory. The collected samples were sent to the Pennsylvania certified environmental laboratory, PACE Analytical, and analyzed for total lead by USEPA Method 200.8, to meet Pennsylvania's action level requirements.

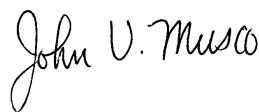
The results did not detect any exceedances at this school of the Pennsylvania Action Level of 15 micrograms per liter (ug/L) with the exception of the following locations:

<u>Location</u>	<u>Sample ID</u>	<u>Result</u>
Kitchen 1-bowl by ice machine	L127CB_070221	64.0 ug/L
Rm 102	L102F_070221	51.4 ug/L
Rm 105	L105A_070221	43.4 ug/L

A figure of the sampling locations and copy of the laboratory report is attached.

Sincerely,

Langan Engineering & Environmental Services, Inc.



John V. Musco
Associate

Enclosure

cc: B. Lambing - Langan

NJ Certificate of Authorization No. 24GA27996400

\\langan.com\data\DYL\data4\200130403\Project Data\Record Data\Reports\Day 6_7-2-2021_West_West
Stad_Lenape_Doyle_Holicong\3rd_Lenape\Lenape_Lead_Sampling_Report_2021.docx

July 21, 2021

Bill Lambing
Langan Engineering
2700 Kelly Road
Suite 200
Warrington, PA 18976

RE: Project: CENTRAL BUCKS SD (LENAPE)
Pace Project No.: 70179821

Dear Bill Lambing:

Enclosed are the analytical results for sample(s) received by the laboratory on July 06, 2021. 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

Revision 1: Report re-issued 7/21/21 for updated sample ID

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

Sincerely,



Sophia Sparkes
sophia.sparkes@pacelabs.com
(631)694-3040
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CENTRAL BUCKS SD (LENAPE)

Pace Project No.: 70179821

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CENTRAL BUCKS SD (LENAPE)

Pace Project No.: 70179821

Sample: L134A_0702221	Lab ID: 70179821001	Collected: 07/02/21 07:58	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 17:41	7439-92-1	

Sample: L134B_0702221	Lab ID: 70179821002	Collected: 07/02/21 07:59	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 17:46	7439-92-1	

Sample: L134C_0702221	Lab ID: 70179821003	Collected: 07/02/21 07:57	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 17:47	7439-92-1	

Sample: L127CA_0702221	Lab ID: 70179821004	Collected: 07/02/21 08:05	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	1.4	ug/L	1.0	1		07/14/21 17:48	7439-92-1	

Sample: L127CB_0702221	Lab ID: 70179821005	Collected: 07/02/21 08:05	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	64.0	ug/L	1.0	1		07/14/21 17:49	7439-92-1	

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ANALYTICAL RESULTS

Project: CENTRAL BUCKS SD (LENAPE)
Pace Project No.: 70179821

Sample: LG1_0702221	Lab ID: 70179821006	Collected: 07/02/21 08:10	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 17:50	7439-92-1	

Sample: LG2_0702221	Lab ID: 70179821007	Collected: 07/02/21 08:10	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 17:51	7439-92-1	

Sample: L103D_0702221	Lab ID: 70179821008	Collected: 07/02/21 08:12	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 17:52	7439-92-1	

Sample: L103C_0702221	Lab ID: 70179821009	Collected: 07/02/21 08:13	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 17:53	7439-92-1	

Sample: L102A_0702221	Lab ID: 70179821010	Collected: 07/02/21 08:20	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 17:54	7439-92-1	

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ANALYTICAL RESULTS

Project: CENTRAL BUCKS SD (LENAPE)
Pace Project No.: 70179821

Sample: L102B_0702221	Lab ID: 70179821011	Collected: 07/02/21 08:20	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 17:55	7439-92-1	
Sample: L102C_0702221	Lab ID: 70179821012	Collected: 07/02/21 08:21	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 18:00	7439-92-1	
Sample: L102D_0702221	Lab ID: 70179821013	Collected: 07/02/21 08:21	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 18:01	7439-92-1	
Sample: L102E_0702221	Lab ID: 70179821014	Collected: 07/02/21 08:22	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	1.8	ug/L	1.0	1		07/14/21 18:02	7439-92-1	
Sample: L102F_0702221	Lab ID: 70179821015	Collected: 07/02/21 08:22	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	51.4	ug/L	1.0	1		07/14/21 18:03	7439-92-1	

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ANALYTICAL RESULTS

Project: CENTRAL BUCKS SD (LENAPE)
Pace Project No.: 70179821

Sample: L105A_0702221	Lab ID: 70179821016	Collected: 07/02/21 08:17	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	43.4	ug/L	1.0	1		07/14/21 18:04	7439-92-1	
Sample: L105B_0702221	Lab ID: 70179821017	Collected: 07/02/21 08:17	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	4.4	ug/L	1.0	1		07/14/21 18:05	7439-92-1	
Sample: L106A_0702221	Lab ID: 70179821018	Collected: 07/02/21 08:15	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	1.2	ug/L	1.0	1		07/14/21 18:06	7439-92-1	
Sample: LMO_0702221	Lab ID: 70179821019	Collected: 07/02/21 08:37	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 18:07	7439-92-1	
Sample: L204_0702221	Lab ID: 70179821020	Collected: 07/02/21 08:34	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	1.2	ug/L	1.0	1		07/14/21 18:10	7439-92-1	

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ANALYTICAL RESULTS

Project: CENTRAL BUCKS SD (LENAPE)
Pace Project No.: 70179821

Sample: L205_0702221	Lab ID: 70179821021	Collected: 07/02/21 08:34	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	1.3	ug/L	1.0	1		07/14/21 18:13	7439-92-1	

Sample: L202_0702221	Lab ID: 70179821022	Collected: 07/02/21 08:41	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	7.1	ug/L	1.0	1		07/14/21 18:16	7439-92-1	

Sample: L206B_0702221	Lab ID: 70179821023	Collected: 07/02/21 08:32	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	1.3	ug/L	1.0	1		07/14/21 18:17	7439-92-1	

Sample: L206A_0702221	Lab ID: 70179821024	Collected: 07/02/21 08:31	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 18:18	7439-92-1	

Sample: LNA_0702221	Lab ID: 70179821025	Collected: 07/02/21 08:29	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 18:19	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CENTRAL BUCKS SD (LENAPE)
Pace Project No.: 70179821

Sample: LNB_0702221	Lab ID: 70179821026	Collected: 07/02/21 08:29	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 18:22	7439-92-1	
Sample: LNC_0702221	Lab ID: 70179821027	Collected: 07/02/21 08:29	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 18:23	7439-92-1	
Sample: L226_0702221	Lab ID: 70179821028	Collected: 07/02/21 08:44	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	4.5	ug/L	1.0	1		07/14/21 18:24	7439-92-1	
Sample: L227_0702221	Lab ID: 70179821029	Collected: 07/02/21 08:44	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	2.6	ug/L	1.0	1		07/14/21 18:25	7439-92-1	
Sample: L236A_0702221	Lab ID: 70179821030	Collected: 07/02/21 08:48	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 18:26	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CENTRAL BUCKS SD (LENAPE)

Pace Project No.: 70179821

Sample: L236B_0702221	Lab ID: 70179821031	Collected: 07/02/21 08:48	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 18:27	7439-92-1	

Sample: L236C_0702221	Lab ID: 70179821032	Collected: 07/02/21 08:48	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 18:30	7439-92-1	

Sample: LR12_0702221	Lab ID: 70179821033	Collected: 07/02/21 08:50	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 18:31	7439-92-1	

Sample: LR11_0702221	Lab ID: 70179821034	Collected: 07/02/21 08:50	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	<1.0	ug/L	1.0	1		07/14/21 18:34	7439-92-1	

Sample: L334_0702221	Lab ID: 70179821035	Collected: 07/02/21 08:51	Received: 07/06/21 19:20	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville							
Lead	1.1	ug/L	1.0	1		07/14/21 18:35	7439-92-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CENTRAL BUCKS SD (LENAPE)

Pace Project No.: 70179821

Sample: L325_0702221	Lab ID: 70179821036	Collected: 07/02/21 08:53	Received: 07/06/21 19:20	Matrix: Drinking Water					
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
200.8 MET ICPMS Drinking Water	Analytical Method: EPA 200.8 Pace Analytical Services - Melville								
Lead	<1.0	ug/L	1.0	1		07/14/21 18:36	7439-92-1		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CENTRAL BUCKS SD (LENAPE)
Pace Project No.: 70179821

QC Batch:	217658	Analysis Method:	EPA 200.8
QC Batch Method:	EPA 200.8	Analysis Description:	200.8 MET No Prep Drinking Water
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70179821001, 70179821002, 70179821003, 70179821004, 70179821005, 70179821006, 70179821007, 70179821008, 70179821009, 70179821010, 70179821011, 70179821012, 70179821013, 70179821014, 70179821015, 70179821016, 70179821017, 70179821018, 70179821019, 70179821020

METHOD BLANK: 1096886 Matrix: Water

Associated Lab Samples: 70179821001, 70179821002, 70179821003, 70179821004, 70179821005, 70179821006, 70179821007, 70179821008, 70179821009, 70179821010, 70179821011, 70179821012, 70179821013, 70179821014, 70179821015, 70179821016, 70179821017, 70179821018, 70179821019, 70179821020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	<1.0	1.0	07/14/21 17:39	

LABORATORY CONTROL SAMPLE: 1096887

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	50	49.2	98	85-115	

MATRIX SPIKE SAMPLE: 1096889

Parameter	Units	70179821001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	<1.0	50	55.8	110	70-130	

MATRIX SPIKE SAMPLE: 1096891

Parameter	Units	70179821011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	<1.0	50	55.9	111	70-130	

SAMPLE DUPLICATE: 1096888

Parameter	Units	70179821001 Result	Dup Result	RPD	Qualifiers
Lead	ug/L	<1.0	<1.0		

SAMPLE DUPLICATE: 1096890

Parameter	Units	70179821011 Result	Dup Result	RPD	Qualifiers
Lead	ug/L	<1.0	<1.0		

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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QUALITY CONTROL DATA

Project: CENTRAL BUCKS SD (LENAPE)
Pace Project No.: 70179821

QC Batch:	217660	Analysis Method:	EPA 200.8
QC Batch Method:	EPA 200.8	Analysis Description:	200.8 MET No Prep Drinking Water
		Laboratory:	Pace Analytical Services - Melville

Associated Lab Samples: 70179821021, 70179821022, 70179821023, 70179821024, 70179821025, 70179821026, 70179821027, 70179821028, 70179821029, 70179821030, 70179821031, 70179821032, 70179821033, 70179821034, 70179821035, 70179821036

METHOD BLANK: 1096896 Matrix: Water

Associated Lab Samples: 70179821021, 70179821022, 70179821023, 70179821024, 70179821025, 70179821026, 70179821027, 70179821028, 70179821029, 70179821030, 70179821031, 70179821032, 70179821033, 70179821034, 70179821035, 70179821036

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	<1.0	1.0	07/14/21 18:11	

LABORATORY CONTROL SAMPLE: 1096897

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	50	49.5	99	85-115	

MATRIX SPIKE SAMPLE: 1096899

Parameter	Units	70179821021 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	1.3	50	58.1	114	70-130	

MATRIX SPIKE SAMPLE: 1096901

Parameter	Units	70179821031 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	<1.0	50	56.2	112	70-130	

SAMPLE DUPLICATE: 1096898

Parameter	Units	70179821021 Result	Dup Result	RPD	Qualifiers
Lead	ug/L	1.3	1.2	3	

SAMPLE DUPLICATE: 1096900

Parameter	Units	70179821031 Result	Dup Result	RPD	Qualifiers
Lead	ug/L	<1.0	<1.0		

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: CENTRAL BUCKS SD (LENAPE)

Pace Project No.: 70179821

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.

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CENTRAL BUCKS SD (LENAPE)

Pace Project No.: 70179821

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70179821001	L134A_0702221	EPA 200.8	217658		
70179821002	L134B_0702221	EPA 200.8	217658		
70179821003	L134C_0702221	EPA 200.8	217658		
70179821004	L127CA_0702221	EPA 200.8	217658		
70179821005	L127CB_0702221	EPA 200.8	217658		
70179821006	LG1_0702221	EPA 200.8	217658		
70179821007	LG2_0702221	EPA 200.8	217658		
70179821008	L103D_0702221	EPA 200.8	217658		
70179821009	L103C_0702221	EPA 200.8	217658		
70179821010	L102A_0702221	EPA 200.8	217658		
70179821011	L102B_0702221	EPA 200.8	217658		
70179821012	L102C_0702221	EPA 200.8	217658		
70179821013	L102D_0702221	EPA 200.8	217658		
70179821014	L102E_0702221	EPA 200.8	217658		
70179821015	L102F_0702221	EPA 200.8	217658		
70179821016	L105A_0702221	EPA 200.8	217658		
70179821017	L105B_0702221	EPA 200.8	217658		
70179821018	L106A_0702221	EPA 200.8	217658		
70179821019	LMO_0702221	EPA 200.8	217658		
70179821020	L204_0702221	EPA 200.8	217658		
70179821021	L205_0702221	EPA 200.8	217660		
70179821022	L202_0702221	EPA 200.8	217660		
70179821023	L206B_0702221	EPA 200.8	217660		
70179821024	L206A_0702221	EPA 200.8	217660		
70179821025	LNA_0702221	EPA 200.8	217660		
70179821026	LNB_0702221	EPA 200.8	217660		
70179821027	LNC_0702221	EPA 200.8	217660		
70179821028	L226_0702221	EPA 200.8	217660		
70179821029	L227_0702221	EPA 200.8	217660		
70179821030	L236A_0702221	EPA 200.8	217660		
70179821031	L236B_0702221	EPA 200.8	217660		
70179821032	L236C_0702221	EPA 200.8	217660		
70179821033	LR12_0702221	EPA 200.8	217660		
70179821034	LR11_0702221	EPA 200.8	217660		
70179821035	L334_0702221	EPA 200.8	217660		
70179821036	L325_0702221	EPA 200.8	217660		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields

WO#: 70179821



70179821

Section A

Section B

Section C

Required Client Information:

Required Project Information:

Invoice Information:

Company: Langan Engineering	Report To: Bill Lambing	Attention: Bill Lambing	Regulatory Agency
Address: 2700 Kelly Road, Suite 200 Warrington, PA 18976	Copy To:	Company Name: Langan Engineering	
Email: blaming@langan.com	Purchase Order #: 200130403-400-001	Address: 2700 Kelly Road, Suite 200	
Phone: 215-491-6500 Fax 2015-491-6501	Project Name: Central Bucks School District (Lenape)	Pace Quote: See Langan-Pace MSA	
Requested Due Date: Standard Turn Around (5 day)	Project #: 200130403	Pace Project Manager: sophia.sparkes@pacelabs.com	State / Location
		Pace Profile #: 7983	PA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample IDs must be unique	MATRIX Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Other Tissue	CODE DW WT WW P SL CL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	Preservatives										Y/N	Requested Analysis Filtered (Y/N)	Y/N	Residual Chlorine (Y/N)	
						START		END			# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test					200.7 Metals (PB)
						DATE	TIME	DATE	TIME																
1	L134A_070221	DW	G	7/2/2021	758	7/2/2021	758	1				X										X			
2	L134B_070221	DW	G	7/2/2021	759	7/2/2021	759	1				X											X		
3	L134C_070221	DW	G	7/2/2021	757	7/2/2021	757	1				X											X		
4	L127CA_070221	DW	G	7/2/2021	805	7/2/2021	805	1				X											X		
5	L127CB_070221	DW	G	7/2/2021	805	7/2/2021	805	1				X											X		
6	LG1_070221	DW	G	7/2/2021	810	7/2/2021	810	1				X											X		
7	LG2_070221	DW	G	7/2/2021	810	7/2/2021	810	1				X											X		
8	L103D_070221	DW	G	7/2/2021	812	7/2/2021	812	1				X											X		
9	L103C_070221	DW	G	7/2/2021	813	7/2/2021	813	1				X											X		
10	L102A_070221	DW	G	7/2/2021	820	7/2/2021	820	1				X											X		
11	L102B_070221	DW	G	7/2/2021	820	7/2/2021	820	1				X											X		
12	L102C_070221	DW	G	7/2/2021	821	7/2/2021	821	1				X											X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	<i>Bill Lambing</i>	7/6/2021	16:00	<i>Pace Analytical</i>	7/6/2021	11:00	
	<i>Pat Dwyer</i>	7/6/21	16:30	<i>Pat Dwyer</i>	7/6/21	16:20	
	<i>Pat Dwyer</i>	7/6/21	19:20	<i>Pat Dwyer</i>	7/6/21	19:20	

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on ice (Y/N)	Custody Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Bill Lambing					
SIGNATURE of SAMPLER:	<i>Bill Lambing</i>					
DATE Signed:		7/6/2021				



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Langan Engineering	Report To: Bill Lambing	Attention: Bill Lambing
Address: 2700 Kelly Road, Suite 200 Warrington, PA 18976	Copy To:	Company Name: Langan Engineering
Email: blambing@langan.com	Purchase Order #: 200130403-400-001	Address: 2700 Kelly Road, Suite 200
Phone: 215-491-6500 Fax 2015-491-6501	Project Name: Central Bucks School District (Lenape)	Pace Quote: See Langan-Pace MSA
Requested Due Date: Standard Turn Around (5 day)	Project #: 200130403	Pace Project Manager: sophia.sparkes@pacelabs.com,
		Pace Profile #: 7983

Regulatory Agency
State / Location
PA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , , -) Sample IDs must be unique	MATRIX Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Other Tissue	CODE DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test 200.7 Metals (PB)	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	
						START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol				Other
						DATE	TIME	DATE	TIME													
13	L102D_070221	DW	G	7/2/2021	821	7/2/2021	821	1		X							X					
14	L102E_070221	DW	G	7/2/2021	822	7/2/2021	822	1		X							X					
15	L102F_070221	DW	G	7/2/2021	822	7/2/2021	822	1		X							X					
16	L105A_070221	DW	G	7/2/2021	817	7/2/2021	817	1		X							X					
17	L105B_070221	DW	G	7/2/2021	817	7/2/2021	817	1		X							X					
18	L106A_070221	DW	G	7/2/2021	815	7/2/2021	815	1		X							X					
19	LMO_070221	DW	G	7/2/2021	837	7/2/2021	837	1		X							X					
20	L204_070221	DW	G	7/2/2021	834	7/2/2021	834	1		X							X					
21	L205_070221	DW	G	7/2/2021	834	7/2/2021	834	1		X							X					
22	L202_070221	DW	G	7/2/2021	841	7/2/2021	841	1		X							X					
23	L206B_070221	DW	G	7/2/2021	832	7/2/2021	832	1		X							X					
24	L206A_070221	DW	G	7/2/2021	831	7/2/2021	831	1		X							X					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	<i>Bill Lambing</i>	7/6/2021		<i>[Signature]</i>	7/6/2021	11:00	
	<i>[Signature]</i>	7/6/21	1920	<i>[Signature]</i>	7/6/21	1620	
	<i>[Signature]</i>	7/6/21	1920	<i>[Signature]</i>	7/6/21	1920	

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Bill Lambing				
SIGNATURE of SAMPLER:	<i>[Signature]</i>	DATE Signed:	7/6/2021		



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A

Required Client Information:

Company: Langan Engineering
 Address: 2700 Kelly Road, Suite 200
 Warrington, PA 18976
 Email: blaming@langan.com
 Phone: 215-491-6500 Fax 2015-491-6501
 Requested Due Date: Standard Turn Around (5 day)

Section B

Required Project Information:

Report To: Bill Lambing
 Copy To:
 Purchase Order #: 200130403-400-001
 Project Name: Central Bucks School District (Lenape)
 Project #: 200130403

Section C

Invoice Information:

Attention: Bill Lambing
 Company Name: Langan Engineering
 Address: 2700 Kelly Road, Suite 200
 Pace Quote: See Langan-Pace MSA
 Pace Project Manager: sophia.sparkes@pacelabs.com,
 Pace Profile #: 7983

Regulatory Agency	State / Location	PA
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ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique	MATRIX Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Other Tissue	CODE DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Y/N	Requested Analysis Filtered (Y/N)							Residual Chlorine (Y/N)		
						START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol		Other	Analyses Test	2007 Metals (PB)							
						DATE	TIME	DATE	TIME																				
25	LNA_070221	DW	G	7/2/2021	829	7/2/2021	829	1		X							X												
26	LNB_070221	DW	G	7/2/2021	829	7/2/2021	829	1		X							X												
27	LNC_070221	DW	G	7/2/2021	829	7/2/2021	829	1		X							X												
28	L226_070221	DW	G	7/2/2021	844	7/2/2021	844	1		X							X												
29	L227_070221	DW	G	7/2/2021	844	7/2/2021	844	1		X							X												
30	L236A_070221	DW	G	7/2/2021	848	7/2/2021	848	1		X							X												
31	L236B_070221	DW	G	7/2/2021	848	7/2/2021	848	1		X							X												
32	L236C_070221	DW	G	7/2/2021	848	7/2/2021	848	1		X							X												
33	LR12_070221	DW	G	7/2/2021	850	7/2/2021	850	1		X							X												
34	LR11_070221	DW	G	7/2/2021	850	7/2/2021	850	1		X							X												
35	L334_070221	DW	G	7/2/2021	851	7/2/2021	851	1		X							X												
36	L325_070221	DW	G	7/2/2021	853	7/2/2021	853	1		X							X												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	<i>Bill Lambing</i>	7/6/2021		<i>John D. ...</i>	7/6/2021	11:00	
	<i>John D. ...</i>	7/6/21	16:20	<i>John D. ...</i>	7/6/21	16:20	
	<i>John D. ...</i>	7/6/21	19:20	<i>John D. ...</i>	7/6/21	19:20	

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:					
SIGNATURE of SAMPLER: <i>Bill Lambing</i>					



Sample Condition Upon Receipt

WO#: 70179821

Client Name: lan

Project: _____

PM: STS

Due Date: 07/21/21

CLIENT: LAN-PA

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes NoPacking Material: Bubble Wrap Bubble Bags Ziploc None OtherThermometer Used: TH091 Correction Factor: +0.0Cooler Temperature(°C): 19.0 Cooler Temperature Corrected(°C): 19.0

Temp should be above freezing to 6.0°C

USDA Regulated Soil (N/A, water sample)Temperature Blank Present: Yes NoType of Ice: Wet Blue None Samples on ice, cooling process has begun

Date/Time 5035A kits placed in freezer _____

Date and Initials of person examining contents: 7/16/21 JPDid 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 NoDid samples originate 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: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name & Signature on COC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
Short Hold Time Analysis (<72hr): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume: (Triple volume provided for) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
Correct Containers Used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Containers Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12.
-Includes date/time/ID, Matrix: SL <input checked="" type="checkbox"/> WT OIL	
All containers needing preservation have been checked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
pH paper Lot # <u>HCO2546</u>	Sample #
All containers needing preservation are found to be in compliance with method recommendation? (HNO ₃ , H ₂ SO ₄ , HCl, NaOH >9 Sulfide, <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
NAOH >12 Cyanide)	
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water).	Initial when completed: _____ Lot # of added preservative: _____ Date/Time preservative added: _____
Per Method, VOA pH is checked after analysis	
Samples checked for dechlorination: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14. Positive for Res. Chlorine? Y N
KI starch test strips Lot #	
Residual chlorine strips Lot #	
SM 4500 CN samples checked for sulfide? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Lead Acetate Strips Lot #	
Headspace in VOA Vials (>6mm): <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Present: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17.
Trip Blank Custody Seals Present <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if applicable): _____	

Client Notification/ Resolution: _____

Field Data Required? Y / N

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____