LANGAN

Technical Excellence
Practical Experience
Client Responsiveness

September 17, 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 Re-Sample Collection and Reporting
Kutz Elementary School
1950 Turk Road
Doylestown, PA 18901

Dear Mr. Hanna:

This document has been prepared by Langan to provide the results of the drinking water re-sampling activities at the above referenced school. Two water samples (KB3R2, KC1R2) were collected from the school. The re-sampling activities were conducted on September 3, 2021 after the drinking water fixtures were replaced. The collected samples were sent to a Pennsylvania certified environmental laboratory, PACE Analytical, and analyzed for total lead by USEPA Method 200.8, to meet Pennsylvania's action level requirements.

The re-sampling 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 location:

Location	Sample ID	Result
KB3	KB3R2_090321	70.3 ug/L

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

Sincerely,
Langan Engineering & Environmental Services, Inc.

John V. Musco

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\ReSampling - September 2021\Kutz\Kutz_Lead_Re-Sampling_Report_09-2021.docx

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

September 10, 2021

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

RE: Project: CENTRAL BUCKS SCHOOL (KUTZ)
Pace Project No.: 70186440

Dear Bill Lambing:

Enclosed are the analytical results for sample(s) received by the laboratory on September 04, 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 - Minneapolis

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

Sincerely,

Sophia Sparkes

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

Enclosures

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
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CERTIFICATIONS

Project: CENTRAL BUCKS SCHOOL (KUTZ)
Pace Project No.: 70186440

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
A2LA Certification #: 2926.01*
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
*Please Note: Applicable air certifications are denoted with an asterisk (*).

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SAMPLE ANALYTE COUNT

Project: CENTRAL BUCKS SCHOOL (KUTZ)
Pace Project No.: 70186440

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
70186440001	**KB3R2_090321**	EPA 200.8	PW1	1	PASI-M
70186440002	**KC1R2_090321**	EPA 200.8	PW1	1	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

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ANALYTICAL RESULTS

Project: CENTRAL BUCKS SCHOOL (KUTZ)
Pace Project No.: 70186440

Sample: KB3R2_090321 **Lab ID: 70186440001** Collected: 09/03/21 07:54 Received: 09/04/21 09:10 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS, DW	Analytical Method: EPA 200.8 Pace Analytical Services - Minneapolis							
Lead	**70.3**	ug/L	0.10	1		09/09/21 18:17	7439-92-1	

Sample: KC1R2_090321 **Lab ID: 70186440002** Collected: 09/03/21 07:57 Received: 09/04/21 09:10 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS, DW	Analytical Method: EPA 200.8 Pace Analytical Services - Minneapolis							
Lead	**13.4**	ug/L	0.10	1		09/09/21 18:19	7439-92-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: CENTRAL BUCKS SCHOOL (KUTZ)
Pace Project No.: 70186440

QC Batch: 769219
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: ICPMS Metals, Drinking Water
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 70186440001, 70186440002

METHOD BLANK: 4098714 Matrix: Water
Associated Lab Samples: 70186440001, 70186440002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	<0.10	0.10	09/09/21 17:47	

LABORATORY CONTROL SAMPLE: 4098750

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	100	106	106	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4098752 4098753

Parameter	Units	70186444001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Lead	ug/L	1.0	100	100	116	112	115	111	70-130	3	

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

Pace Analytical Services, LLC
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QUALIFIERS

Project: CENTRAL BUCKS SCHOOL (KUTZ)
Pace Project No.: 70186440

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: CENTRAL BUCKS SCHOOL (KUTZ)
Pace Project No.: 70186440

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70186440001	**KB3R2_090321**	EPA 200.8	769219		
70186440002	**KC1R2_090321**	EPA 200.8	769219		

REPORT OF LABORATORY ANALYSIS

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request

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

WO# : 70186440

70186440

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	Copy To:		Company Name:	Langan Engineering
	Warrington, PA 18976			Address:	2700 Kelly Road, Suite 200
Email:	blambing@langan.com	Purchase Order #:	200130403-400-001	Pace Quote:	See Langan-Pace MSA
Phone:	215-491-6500 Fax: 2015-491-6501	Project Name:	Central Bucks School District (Kulz)	Pace Project Manager:	sophia.sparkes@pacelabs.com
Requested Due Date:	72 hour (3 day) Turn Around	Project #:	200130403	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 CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Analyses Test: 200.7 Metals (PB)	Residual Chlorine (Y/N)
1	KB3R2_090321	DW	G	9/3/2021	754	9/3/2021	754		1			X							X	
2	KC1R2_090321	DW	G	9/3/2021	757	9/3/2021	757		1			X							X	
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Bill Lambing	9/3/2021	1600	PACE	9/4/21	9:10	21.2	N	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Bill Lambing

SIGNATURE of SAMPLER: Bill Lambing

DATE Signed: 9/3/2021

Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR) - MN**	Document Revised: 14Apr2021 **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0150 Rev.02**	Pace Analytical Services - **Minneapolis**

Sample Condition Upon Receipt

Client Name: Langan Engineering

Project #: **WO#: 70186440**

PM: STS **Due Date: 09/21/21**

CLIENT: LAN-PA

Courier: ☒Fed Ex ☐UPS ☐USPS ☐Client ☐Pace ☐SpeeDee ☐Commercial

Tracking Number: 7747 1740 4528 See Exceptions ☐ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☒Yes ☐No **Seals Intact?** ☒Yes ☐No **Biological Tissue Frozen?** ☐Yes ☐No ☒N/A

Packing Material: ☐Bubble Wrap ☐Bubble Bags ☐None ☒Other: Paper **Temp Blank?** ☐Yes ☒No

Thermometer: ☒T1(0461) ☐T2(1336) ☐T3(0459) ☐OS418-LS ☐T4(0254) ☐T5(0489) ☐160285052 **Type of Ice:** ☐Wet ☐Blue ☒None ☐Dry ☐Melted

Did Samples Originate in West Virginia? ☐Yes ☒No **Were All Container Temps Taken?** ☐Yes ☐No ☒N/A

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** _____ °C

Correction Factor: true **Cooler Temp Corrected w/temp blank:** _____ °C

Average Corrected Temp (no temp blank only): 21.2 °C ☒See Exceptions ENV-FRM-MIN4-0142 ☐1 Container

USDA Regulated Soil: (☒N/A, water sample/Other: _____)

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 maps)? ☐Yes ☐No

Did samples originate from a foreign source (Internationally, including Hawaii and Puerto Rico)? ☐Yes ☐No

Date/Initials of Person Examining Contents: MB 9/9/21

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒Yes	☐No		1.
Chain of Custody Relinquished?	☒Yes	☐No		2.
Sampler Name and/or Signature on COC?	☒Yes	☐No	☐N/A	3.
Samples Arrived within Hold Time?	☒Yes	☐No		4.
Short Hold Time Analysis (<72 hr)?	☐Yes	☒No		5. ☐Fecal Coliform ☐HPC ☐Total Coliform/E coli ☐BOD/cBOD ☐Hex Chrome ☐Turbidity ☐Nitrate ☐Nitrite ☐Orthophos ☐Other
Rush Turn Around Time Requested?	☒Yes	☐No		6. 3-day
Sufficient Volume?	☒Yes	☐No		7.
Correct Containers Used? -Pace Containers Used?	☒Yes ☒Yes	☐No ☐No		8.
Containers Intact?	☒Yes	☐No		9.
Field Filtered Volume Received for Dissolved Tests?	☐Yes	☐No	☒N/A	10. Is sediment visible in the dissolved container? ☐Yes ☐No
Is sufficient information available to reconcile the samples to the COC?	☒Yes	☐No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐ ENV-FRM-MIN4-0142
Matrix: ☒Water ☐Soil ☐Oil ☐Other				
All containers needing acid/base preservation have been checked?	☒Yes	☐No	☐N/A	12. Sample # 001-002
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☒Yes	☐No	☐N/A	☐NaOH ☒HNO_3 ☐H_2SO_4 ☐Zinc Acetate 1/1
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐Yes	☐No	☒N/A	Positive for Res. Chlorine? ☐Yes ☐No **pH Paper Lot#** **See Exception** ☐ ENV-FRM-MIN4-0142
				Res. Chlorine: 0-6 Roll 221419 / 0-6 Strip / 0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	☐Yes	☐No	☒N/A	13. **See Exception** ☐ ENV-FRM-MIN4-0140
Headspace in VOA Vials (greater than 6mm)?	☐Yes	☐No	☒N/A	
Trip Blank Present?	☐Yes	☐No	☒N/A	14.
Trip Blank Custody Seals Present?	☐Yes	☐No	☒N/A	Pace Trip Blank Lot # (If purchased): _____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐Yes ☐No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: _____