

September 28, 2020

Robert Kleimenhagen, Jr., CFM
Director of Facilities & Energy Management Operations
Central Bucks School District
320 West Swamp Road
Doylestown, PA 18901

**Re: Lead in Drinking Water Re-Sample Collection and Reporting
Central Bucks East High School
2804 Holicong Road
Doylestown, PA 18902
Bucks County, Pennsylvania**

Dear Mr. Kleimenhagen:

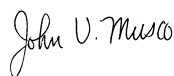
This document has been prepared by Langan to provide the results of the drinking water re-sampling activities at the above referenced school. The results of the initial (June 2020) and second (July 2020) drinking water sampling activities documented that total lead was present in one sample location collected from a drinking water fixture at the school at a level above the 15 micrograms per liter (ug/l) regulatory level. The re-sampling was conducted on September 18, 2020 and the sample was 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 re-sampling result did detect an exceedance at this school of the Pennsylvania Action Level of 15 micrograms per liter (ug/L) with the exception of the following location:

| <u>Location</u> | <u>Sample ID</u> | <u>Result</u> |
|-----------------|------------------|---------------|
| B108 | B108RR-20 | 51.1 ug/L |

A field sketch of the sampling location 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\200130402\Project Data\Record Data\Reports\Resampling Data and Report\Buckingham and CB East Resampling 9-18-2020\East_Lead_Re-Sampling_Memo_9-18-2020.docx

September 25, 2020

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

RE: Project: CENTRAL BUCKS SCHOOL - CB EAST
Pace Project No.: 70146874

Dear Bill Lambing:

Enclosed are the analytical results for sample(s) received by the laboratory on September 19, 2020. 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,



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

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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CERTIFICATIONS

Project: CENTRAL BUCKS SCHOOL - CB EAST

Pace Project No.: 70146874

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747

New York Certification #: 10478 Primary Accrediting Body

New Jersey Certification #: NY158

Pennsylvania Certification #: 68-00350

Connecticut Certification #: PH-0435

Maryland Certification #: 208

Rhode Island Certification #: LAO00340

Massachusetts Certification #: M-NY026

New Hampshire Certification #: 2987

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ANALYTICAL RESULTS

Project: CENTRAL BUCKS SCHOOL - CB EAST

Pace Project No.: 70146874

| Sample: B108RR-20 | | Lab ID: 70146874001 | | Collected: 09/18/20 07:29 | Received: 09/19/20 10:30 | 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 | 51.1 | ug/L | 1.0 | 1 | | 09/24/20 17:48 | 7439-92-1 | |

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QUALITY CONTROL DATA

Project: CENTRAL BUCKS SCHOOL - CB EAST
Pace Project No.: 70146874

QC Batch: 178772 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: 70146874001

METHOD BLANK: 868478 Matrix: Water
Associated Lab Samples: 70146874001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Lead | ug/L | <1.0 | 1.0 | 09/24/20 17:45 | |

LABORATORY CONTROL SAMPLE: 868479

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Lead | ug/L | 50 | 49.9 | 100 | 85-115 | |

MATRIX SPIKE SAMPLE: 868481

| Parameter | Units | 70146874001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Lead | ug/L | 51.1 | 4 | 54.7 | 91 | 70-130 | |

MATRIX SPIKE SAMPLE: 868483

| Parameter | Units | 70146875010 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Lead | ug/L | 3.6 | 4 | 8.0 | 109 | 70-130 | |

SAMPLE DUPLICATE: 868480

| Parameter | Units | 70146874001 Result | Dup Result | RPD | Qualifiers |
|-----------|-------|--------------------|------------|-----|------------|
| Lead | ug/L | 51.1 | 50.8 | 0 | |

SAMPLE DUPLICATE: 868482

| Parameter | Units | 70146875010 Result | Dup Result | RPD | Qualifiers |
|-----------|-------|--------------------|------------|-----|------------|
| Lead | ug/L | 3.6 | 3.6 | 1 | |

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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QUALIFIERS

Project: CENTRAL BUCKS SCHOOL - CB EAST

Pace Project No.: 70146874

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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CENTRAL BUCKS SCHOOL - CB EAST

Pace Project No.: 70146874

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---------------|------------------|------------------------|-----------------|--------------------------|-------------------------|
| 70146874001 | B108RR-20 | EPA 200.8 | 178772 | | |

REPORT OF LABORATORY ANALYSIS

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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 18975
 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 Laming
 Copy To:
 Purchase Order #: 200130402-400-001
 Project Name: Central Bucks School District (CB East)
 Project #: 200130402

Section C Invoice Information:

Attention: Bill Laming
 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

| 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 Y/N | Requested Analysis Filtered (Y/N) | | Regulatory Agency | State / Location | |
|--------|--|--|---|---------------------------------------|-----------------------------|-----------|------|-----------|------|---------------------------|-----------------|---------------|-------|------|-----|------|---------|----------|-------------------|-----------------------------------|-------------------|-------------------|------------------|--|
| | | | | | | START | | END | | | | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2S2O3 | Methanol | | Other | 200.7 Metals (PB) | | | |
| | | | | | | DATE | TIME | DATE | TIME | | | | | | | | | | | | | | | |
| 1 | B108RR-20 | DW | | | | 9/18/2020 | 729 | 9/18/2020 | 729 | 1 | | | X | | | | | X | | | | | | |

WO#: 70146874

 70146874

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS |
|---------------------|-------------------------------|-----------|-------|---------------------------|-----------|-------|-------------------|
| | <i>Bill Laming</i> | 9/18/2020 | 11:33 | <i>[Signature]</i> | 9/18/2020 | 11:33 | |
| | <i>[Signature]</i> | 9/18/20 | 16:30 | <i>[Signature]</i> | 9/19/20 | 10:30 | 11.9 |

| SAMPLER NAME AND SIGNATURE | |
|----------------------------|--|
| PRINT Name of SAMPLER: | Bill Laming |
| SIGNATURE of SAMPLER: | <i>Bill Laming</i> |
| DATE Signed: | 9/18/2020 |
| TEMP in C | Received on ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N) |



Sample Condition Upon Receipt

Client Name: Langan

Proj

WO#: 70146874

PM: STS

Due Date: 09/28/20

CLIENT: LAN-PA

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: 7715 6451 3515

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Temperature Blank Present: Yes No

Packing Material: Bubble Wrap Bubble Bags Ziploc None Other

Type of Ice: Wet Blue None

Thermometer Used: TH091 Correction Factor: +0.4

Samples on ice, cooling process has begun

Cooler Temperature (°C): 11.9 Cooler Temperature Corrected (°C): 12.3

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: 9/19/2018

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 originate from a foreign source (internationally, 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 MS/MSD) | <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 type="checkbox"/> Yes <input type="checkbox"/> No | 12. |
| -Includes date/time/ID/Analysis Matrix SL 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>M4948032</u> | | Sample # |
| All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO 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 | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Initial when completed: Lot # of added preservative: Date/Time preservative added |
| 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 # | | |
| Headspace in VOA Vials (>6mm): | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 15. |
| Trip Blank Present: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 16. |
| 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: _____

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