



COLUMBIA PUBLIC SCHOOLS  
COLUMBIA, MO  
LEAD AND COPPER MONITORING  
SUMMARY REPORT

DATE: JANUARY 6, 2022

FACILITY NAME: **MIDWAY HEIGHTS ELEMENTARY SCHOOL**

**A. SAMPLE COLLECTION**

1. NUMBER OF SAMPLES COLLECTED AT THIS FACILITY	12
2. PERCENTAGE OF SAMPLES BELOW COPPER ACTION LIMITS	100.0%
1. COPPER ACTION LIMIT = 1,300 UG/	
3. PERCENTAGE OF SAMPLES BELOW LEAD ACTION LIMITS	100.0%
1. LEAD ACTION LIMIT = 15 UG/L	
(The requirement in the USEPA Lead and Copper Rule for public water supplies is 90% passing)	

**B. SAMPLE EXCEEDANCE**

1. NUMBER OF SAMPLES EXCEEDING COPPER ACTION LIMIT	0
2. NUMBER OF SAMPLES EXCEEDING LEAD ACTION LIMIT	0

**C. CONCLUSION**

This facility meets the (recommended) requirements of the United States Environmental Protection Agency (USEPA) and the published Lead and Copper Rule (LCR) of 1991 (reference: 40 CFR Part 141 Subpart I). Public Run Water Suppliers must comply with the USEPA law and the LCR. Columbia Water & Light is the publicly run water utility that serves this school.

Initially failed tests were resampled using the first flush method and tested for verification. Should the laboratory analysis reveal results that exceed the LCR action limits, you can utilize the recommendations within the LCR to address those specific locations. They include but are not limited to: flushing prior to use (make it a practice to run the water at each tap before use), repairing and/or replacing fixtures and/or piping and by not using the water for consumption. All are recommended by the Lead and Copper Rule.

Although the Lead and Copper Rule may not directly apply to Columbia Public Schools and each of its schools or support buildings that are part of the 2020 City of Columbia Water Quality Assessment Report; it is a common practice for experts in the field and members of the known industry to use the standard as a guideline for water assessment studies.

Prepared By:

Joshua D. Lehmen, PE



September 29, 2021

Josh Lehmen  
Engineering Surveys & Services  
1113 Fay Street  
Columbia, MO 65201

RE: L14571

Dear Josh Lehmen:

Please find enclosed the analytical results for the **12** sample(s) the laboratory received on **7/29/21 3:20 pm** and logged in under work order **EH04403**. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of PDC Laboratories.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

PDC Laboratories. appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the Director of Client Services, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or [lgrant@pdclab.com](mailto:lgrant@pdclab.com).

Sincerely,

Erin Lane  
Project Manager





**SAMPLE RECEIPT CHECK LIST**

**Items not applicable will be marked as in compliance**

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Work Order    EH04403

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YES	Samples received within temperature compliance when applicable
NO	COC present upon sample receipt
YES	COC completed & legible
NO	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
NO	Short hold time analysis
YES	Current PDC COC submitted
YES	Case narrative provided



ANALYTICAL RESULTS

Sample: EH04403-01
Name: 1. HALL BY MEDIA CENTER
Alias: MHE-EWC-1

Sampled: 07/23/21 06:26
Received: 07/29/21 15:20
Matrix: Drinking Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Rows for Copper and Lead under Total Metals - PIA.

Sample: EH04403-02
Name: 2. HALL BY ROOM 119
Alias: MHE-119-EWC-2

Sampled: 07/23/21 06:24
Received: 07/29/21 15:20
Matrix: Drinking Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Rows for Copper and Lead under Total Metals - PIA.

Sample: EH04403-03
Name: 3. HALL BY ROOM 102
Alias: MHE-102-EWC-3

Sampled: 07/23/21 06:34
Received: 07/29/21 15:20
Matrix: Drinking Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Rows for Copper and Lead under Total Metals - PIA.

Sample: EH04403-04
Name: 4. TEACHERS LOUNGE
Alias: MHE-TLF-1

Sampled: 07/23/21 06:38
Received: 07/29/21 15:20
Matrix: Drinking Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Rows for Copper and Lead under Total Metals - PIA.



ANALYTICAL RESULTS

Sample: EH04403-05
Name: 5. NURSES STATION FAUCET - MAIN OFFICE
Alias: MHE-NSF-1

Sampled: 07/23/21 06:02
Received: 07/29/21 15:20
Matrix: Drinking Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes Total Metals - PIA section with rows for Copper and Lead.

Sample: EH04403-06
Name: 6. HALL BY MAIN OFFICE
Alias: MHE-EWC-4

Sampled: 07/23/21 06:04
Received: 07/29/21 15:20
Matrix: Drinking Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes Total Metals - PIA section with rows for Copper and Lead.

Sample: EH04403-07
Name: 7. ROOM 10 RESTROOM - OFF
Alias: MHE-RRF-1

Sampled: 07/23/21 06:00
Received: 07/29/21 15:20
Matrix: Drinking Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes Total Metals - PIA section with rows for Copper and Lead.

Sample: EH04403-08
Name: 8. IN GYM
Alias: MHE-EWC-5

Sampled: 07/23/21 06:06
Received: 07/29/21 15:20
Matrix: Drinking Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes Total Metals - PIA section with rows for Copper and Lead.



ANALYTICAL RESULTS

Sample: EH04403-09
Name: 9. HALL BY ROOM 203
Alias: MHE-203-EWC-6

Sampled: 07/23/21 06:12
Received: 07/29/21 15:20
Matrix: Drinking Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes Total Metals - PIA section with rows for Copper and Lead.

Sample: EH04403-10
Name: 10. IN CAFETERIA
Alias: MHE-EWC-7

Sampled: 07/23/21 06:14
Received: 07/29/21 15:20
Matrix: Drinking Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes Total Metals - PIA section with rows for Copper and Lead.

Sample: EH04403-11
Name: 11. KITCHEN FAUCET - WEST SINK
Alias: MHE-KF-1

Sampled: 07/23/21 06:16
Received: 07/29/21 15:20
Matrix: Drinking Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes Total Metals - PIA section with rows for Copper and Lead.

Sample: EH04403-12
Name: 12. KITCHEN FAUCET - EAST SINK
Alias: MHE-KF-2

Sampled: 07/23/21 06:21
Received: 07/29/21 15:20
Matrix: Drinking Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes Total Metals - PIA section with rows for Copper and Lead.



## NOTES

Specifications regarding method revisions and method modifications used for analysis are available upon request. Please contact your project manager.

\* Not a TNI accredited analyte

### Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050

TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279  
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615

TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553

Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)

Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807

USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - 200080

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050

Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050



Certified by: Erin Lane, Project Manager



REGULATORY PROGRAM (CIRCLE):	NPDES
	RCRA
	TACO: RES OR IND/COMM

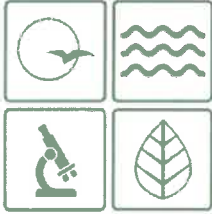
ALL HIGHLIGHTED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT)

<b>1</b> CLIENT Engineering Surveys & Services ADDRESS 1113 Fay Street CITY STATE ZIP Columbia, MO CONTACT PERSON Josh Lehmen	PROJECT NUMBER L14571	PROJECT LOCATION Columbia, MO E-MAIL jlehmen@ess-inc.com	PURCHASE ORDER #  	<b>3</b> ANALYSIS REQUESTED Coper and Lead Standard	(FOR LAB USE ONLY) LOGIN # _____ LOGGED BY: _____ CLIENT: _____ PROJECT: _____ PROJ. MGR.: _____ CUSTODY SEAL #: _____ REMARKS		
	<b>2</b> SAMPLE DESCRIPTION (UNIQUE DESCRIPTION AS IT WILL APPEAR ON THE ANALYTICAL REPORT) Midway Heights Elementary School	DATE COLLECTED 7-23-21	TIME COLLECTED  	SAMPLE TYPE GRAB	MATRIX TYPE COMP	BOTTLE COUNT  	PRES CODE CLIENT PROVIDED  
CHEMICAL PRESERVATION CODES: 1-HCL 2-H2SO4 3-HNO3 4-NAOH 5-NA2S2O3 6-UNPRESERVED 7-OTHER	TURNAROUND TIME REQUESTED (PLEASE CIRCLE) (RUSH TAT IS SUBJECT TO PDC LABS APPROVAL AND SURCHARGE) RUSH RESULTS VIA (PLEASE CIRCLE) EMAIL PHONE	DATE RESULTS NEEDED  	6 - UNPRESERVED	7 - OTHER	<b>5</b> I understand that by initialing this box I give the lab permission to proceed with analysis, even though it may not meet all sample conformance requirements as defined in the receiving facility's Sample Acceptance Policy and the data will be qualified. Qualified data may NOT be acceptable to report to all regulatory authorities. PROCEED WITH ANALYSIS AND QUALIFY RESULTS: (INITIALS) _____		
<b>7</b> RELINQUISHED BY: (SIGNATURE) 	RECEIVED BY: (SIGNATURE)  	DATE 7-23-21 TIME  	<b>8</b> COMMENTS: (FOR LAB USE ONLY)  	SAMPLE TEMPERATURE UPON RECEIPT _____ °C CHILL PROCESS STARTED PRIOR TO RECEIPT _____ Y OR N SAMPLE(S) RECEIVED ON ICE _____ Y OR N SAMPLE ACCEPTANCE NONCONFORMANT _____ Y OR N REPORT IS NEEDED _____ Y OR N DATE AND TIME TAKEN FROM SAMPLE BOTTLE _____			



Location:	Midway Heights Elementary School
Sample Date:	7/23/2021
Sample Time:	Various
Sampled By:	Josh Lehmen

Sample No.	Coding System	Description	Sample Collected
1	MHE-EWC-1	Hall By Media Center	Yes
2	MHE-119- EWC-2	Hall By Room 119	Yes
3	MHE-102-EWC-3	Hall By Room 102	Yes
4	MHE-TLF-1	Teachers Lounge	Yes
5	MHE-NSF- 1	Nurse Station Faucet - Main Office	Yes
6	MHE-EWC-4	Hall By Main Office	Yes
7	MHE-RRF-1	Room 10 Restroom - Off	No
8	MHE-EWC-5	In Gym	Yes
9	MHE-203-EWC-6	Hall By Room 203	Yes
10	MHE-EWC-7	In Cafeteria	Yes
11	MHE-KF-1	Kitchen Faucet - West Sink	Yes
12	MHE-KF-2	Kitchen Faucet - East Sink	Yes
13	MHE-128-CF-1	Room 128 - Art Room Classroom Faucet	Yes
14	MHE-		
15	MHE-		
16	MHE-		
17	MHE-		
18	MHE-		
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40	MHE-		



Missouri Department of [dnr.mo.gov](http://dnr.mo.gov)

# NATURAL RESOURCES

Michael L. Parson, Governor

Dru Buntin, Director

January 6, 2022

Mr. Michael Travis  
Corporate Director of Quality Assurance  
Pace Analytical Services, LLC – Peoria, Illinois (Lab #870)  
2231 West Altorfer Drive  
Peoria, IL 61615-1807

Dear Mr. Travis:

The Missouri Department of Natural Resources has received your notification that PDC Laboratories, LLC was purchased by Pace Analytical Services, LLC effective December 13, 2021 and that the new laboratory name is Pace Analytical Services, LLC – Peoria, Illinois. The Department has also received a copy of the new Environmental Laboratory Accreditation granted by the State of Illinois with your new laboratory name. Therefore, the Department hereby reciprocally certifies Pace Analytical Services, LLC – Peoria, Illinois under the provisions of the Missouri Safe Drinking Water Regulations to perform chemical analyses for public water systems in the State of Missouri.

Enclosed please find a certificate of approval and a certified parameter list for your laboratory. The certified parameter list references the parameters and methods of analysis that the Department has approved. Your certification will expire on June 30, 2022, and is contingent upon no changes of the approved methods or equipment and maintenance of certification from the primary certification authority.

Thank you for your efforts to comply with Missouri's laboratory certification requirements. Should there be any changes to your Illinois certification status, please notify this office within 30 days. Direct any notifications or inquiries related to the approval to Lauren Ferland of my staff, who may be reached at P.O. Box 176, Jefferson City, MO 65102, or by telephone at 573-526-0135.

Sincerely,

WATER PROTECTION PROGRAM

David J. Lamb  
Public Drinking Water Branch Chief

DJL/lf

Enclosures

c: Mr. Richard Kirsch, Environmental Services Program



MISSOURI DEPARTMENT OF NATURAL RESOURCES

DRINKING WATER LABORATORY

CERTIFIED PARAMETER LIST

This is to certify that

**Pace Analytical Services, LLC**  
**- Peoria, Illinois**

located at

2231 West Altorfer Drive, Peoria, Illinois 61615-1807

has been approved to perform the indicated procedures on drinking water under the Missouri Public Drinking Water Regulations (10 CSR 60-5.020). Specific method numbers or references are included in parenthesis when appropriate.

**INORGANIC**

**SM 4500F-C**  
Fluoride

**EPA 245.1**  
Mercury

**SM 4500NO3-F**  
Nitrate, Nitrite

**EPA 300.0**  
Fluoride, Nitrate, Nitrite

**EPA 200.7**  
Barium, Beryllium, Cadmium,  
Chromium, Copper, Nickel

**EPA 335.4**  
Total cyanide

**EPA 200.8**  
Antimony, Arsenic, Barium, Beryllium,  
Cadmium, Chromium, Copper, Lead,  
Mercury, Nickel, Selenium, Thallium

**EPA 353.2**  
Nitrate, Nitrite, Total Nitrate and Nitrite

## ORGANIC

### **EPA 504.1**

Dibromochloropropane (DBCP), Ethylene dibromide (EDB)

### **EPA 515.3**

2,4-D, Dalapon, Dinoseb, Pentachlorophenol, Picloram, 2,4,5-TP (Silvex)

### **EPA 524.2**

Benzene, Carbon tetrachloride, Monochlorobenzene, o-Dichlorobenzene, para-Dichlorobenzene, 1,2-Dichloroethane, 1,1-Dichloroethylene, cis-1-2-Dichloroethylene, trans-1-2-Dichloroethylene, Dichloromethane, 1,2-Dichloropropane, Ethylbenzene, Styrene, Tetrachloroethylene, Toluene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, Xylenes (total), Bromodichloromethane, Bromoform, Chloroform, Dibromochloromethane, Total THMs

### **EPA 525.2**

Alachlor, Atrazine, Chlordane, Di(2-ethylhexyl)adipate, Di(2-ethylhexyl)phthalate, Endrin, Heptachlor, Heptachlor Epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methoxychlor, Simazine, Toxaphene, PCBs (as Arochlors, qualitative, screening)

### **EPA 531.1**

Carbofuran, Oxamyl (Vydate)

### **EPA 547**

Glyphosate

### **EPA 548.1**

Endothall

### **EPA 549.2**

Diquat

### **EPA 550**

Benzo(a)pyrene

### **EPA 552.2**

Dibromoacetic acid, Dichloroacetic acid, Monobromoacetic acid, Monochloroacetic acid, Trichloroacetic acid

**Pace Analytical Services, LLC – Peoria, Illinois**

**Expiration Date: June 30, 2022**

**Missouri Certificate No.: 870**

**Original Certifying State: Illinois**

**State of Missouri**  
**Department of Natural Resources**

**Certificate of Approval**  
**for Chemical Laboratory Service**

This is to certify that

**Pace Analytical Services, LLC – Peoria, Illinois**

is hereby approved to perform the analysis of drinking water as specified on the  
Certified Parameter List, which must accompany this certificate to be valid.

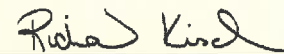
Certification Number 870

Date Issued January 6, 2022

Expiration Date June 30, 2022



Laboratory Certification Authority, Public Drinking Water Branch  
Missouri Department of Natural Resources



Certification Program Manager, Environmental Services Program  
Missouri Department of Natural Resources