



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

DATE: JANUARY 6, 2022

FACILITY NAME: **LANGE MIDDLE SCHOOL**

A. SAMPLE COLLECTION

- | | |
|--|--------|
| 1. NUMBER OF SAMPLES COLLECTED AT THIS FACILITY | 57 |
| 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



August 13, 2021

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

RE: L14571 Lange MS

Dear Josh Lehmen:

Please find enclosed the analytical results for the **56** sample(s) the laboratory received on **7/19/21 3:40 pm** and logged in under work order **EG03510**. 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, Inc.

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, Inc. 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.

Sincerely,

Erin Lane
Project Manager



**SAMPLE RECEIPT CHECK LIST****Items not applicable will be marked as in compliance**

Work Order EG03510

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
NO	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
NO	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: EG03510-01
Name: 1. Nurses Office Room 04
Alias: LMS-04-NSF-1

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	310	ug/L		1300	07/20/21 10:43	TJJ	EPA 200.8 REV 5.4
Lead	12	ug/L		15	07/20/21 10:43	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-02
Name: 2. TLF In Main Office Room 94
Alias: LMS-94-TLF-1

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	170	ug/L		1300	07/20/21 10:44	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 10:44	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-03
Name: 3. Room 95
Alias: LMS-95-CF-1

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	120	ug/L		1300	07/20/21 10:46	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 10:46	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-04
Name: 6. Room 108
Alias: LMS-108-DWF-1

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	130	ug/L		1300	07/20/21 10:47	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 10:47	TJJ	EPA 200.8 REV 5.4



ANALYTICAL RESULTS

Sample: EG03510-05
Name: 7. Room 106
Alias: LMS-106-DWF-2

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	160	ug/L		1300	07/20/21 10:48	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 10:48	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-06
Name: 8. Room 104
Alias: LMS-104-DWF-3

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	140	ug/L		1300	07/20/21 10:50	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 10:50	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-07
Name: 9. Room 102
Alias: LMS-102-DWF-4

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	120	ug/L		1300	07/20/21 10:59	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 10:59	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-08
Name: 10. Room 103
Alias: LMS-103-CF-2

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	190	ug/L		1300	07/20/21 11:01	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:01	TJJ	EPA 200.8 REV 5.4



ANALYTICAL RESULTS

Sample: EG03510-09
Name: 12. Room 129
Alias: LMS-129-DWF-5

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	150	ug/L		1300	07/20/21 11:02	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:02	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-10
Name: 13. Room 127
Alias: LMS-127-DWF-6

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	120	ug/L		1300	07/20/21 11:04	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:04	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-11
Name: 14. Room 125
Alias: LMS-125-DWF-7

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	130	ug/L		1300	07/20/21 11:05	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:05	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-12
Name: 15. Room 123
Alias: LMS-123-DWF-8

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	130	ug/L		1300	07/20/21 11:07	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:07	TJJ	EPA 200.8 REV 5.4



ANALYTICAL RESULTS

Sample: EG03510-13
Name: 16. Room 122
Alias: LMS-122-CF-3

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	160	ug/L		1300	07/20/21 11:08	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:08	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-14
Name: 17. Room 124
Alias: LMS-124-CF-4

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	160	ug/L		1300	07/20/21 11:09	TJJ	EPA 200.8 REV 5.4
Lead	1.4	ug/L		15	07/20/21 11:09	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-15
Name: 18. Teachers Lounge Rm 110
Alias: LMS-110-TLF-2

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	120	ug/L		1300	07/20/21 11:24	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:24	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-16
Name: 19. Room 160
Alias: LMS-160-DWF-9

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	140	ug/L		1300	07/20/21 11:26	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:26	TJJ	EPA 200.8 REV 5.4



ANALYTICAL RESULTS

Sample: EG03510-17
Name: 20. Room 162
Alias: LMS-162-CF-5

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	180	ug/L		1300	07/20/21 11:27	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:27	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-18
Name: 21. Room 164
Alias: LMS-164-CF-6

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	180	ug/L		1300	07/20/21 11:29	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:29	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-19
Name: 22. Room 166
Alias: LMS-166-CF-7

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	180	ug/L		1300	07/20/21 11:30	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:30	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-20
Name: 23. Room 168
Alias: LMS-168-CF-8

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	270	ug/L		1300	07/20/21 11:32	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:32	TJJ	EPA 200.8 REV 5.4



ANALYTICAL RESULTS

Sample: EG03510-21
Name: 24. Room 170
Alias: LMS-170-CF-9

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	270	ug/L		1300	07/20/21 11:33	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:33	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-22
Name: 25. Room 167 East
Alias: LMS-167-CF-10

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	250	ug/L		1300	07/20/21 11:35	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:35	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-23
Name: 26. Room 167 West
Alias: LMS-167-CF-11

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	260	ug/L		1300	07/20/21 11:48	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:48	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-24
Name: 27. Room 165 East
Alias: LMS-165-CF-12

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	210	ug/L		1300	07/20/21 11:49	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:49	TJJ	EPA 200.8 REV 5.4



ANALYTICAL RESULTS

Sample: EG03510-25
Name: 28. Room 165 West
Alias: LMS-165-CF-13

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	220	ug/L		1300	07/20/21 11:51	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:51	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-26
Name: 29. Hall by 115
Alias: LMS-H115-EWC-4

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	180	ug/L		1300	07/20/21 11:52	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:52	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-27
Name: 30. Room 115
Alias: LMS-115-DWF-10

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	160	ug/L		1300	07/20/21 11:54	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:54	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-28
Name: 31. Room 117
Alias: LMS-117-CF-14

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	360	ug/L		1300	07/20/21 11:55	TJJ	EPA 200.8 REV 5.4
Lead	1.1	ug/L		15	07/20/21 11:55	TJJ	EPA 200.8 REV 5.4



ANALYTICAL RESULTS

Sample: EG03510-29
Name: 32. Room 119
Alias: LMS-119-CF-15

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	150	ug/L		1300	07/20/21 11:57	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:57	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-30
Name: 33. Room 118
Alias: LMS-118-CF-16

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	170	ug/L		1300	07/20/21 11:58	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 11:58	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-31
Name: 34. Room 116 West
Alias: LMS-116-CF-17

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	350	ug/L		1300	07/20/21 12:08	TJJ	EPA 200.8 REV 5.4
Lead	1.6	ug/L		15	07/20/21 12:08	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-32
Name: 35. Room 116 Center
Alias: LMS-116-CF-18

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	260	ug/L		1300	07/20/21 12:09	TJJ	EPA 200.8 REV 5.4
Lead	1.3	ug/L		15	07/20/21 12:09	TJJ	EPA 200.8 REV 5.4



ANALYTICAL RESULTS

Sample: EG03510-33
Name: 36. Room 116 East
Alias: LMS-116-CF-19

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	260	ug/L		1300	07/20/21 12:10	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:10	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-34
Name: 37. Girls Locker
Alias: LMS-120-EWC-5

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	230	ug/L		1300	07/20/21 12:12	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:12	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-35
Name: 38. Boys Locker
Alias: LMS-121-EWC-6

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	290	ug/L		1300	07/20/21 12:13	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:13	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-36
Name: 39. Room 90
Alias: LMS-90-EWC-7

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	220	ug/L		1300	07/20/21 12:15	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:15	TJJ	EPA 200.8 REV 5.4



ANALYTICAL RESULTS

Sample: EG03510-37
Name: 40. Room 91
Alias: LMS-91-EWC-8

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	620	ug/L		1300	07/20/21 12:16	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:16	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-38
Name: 41. Room 92
Alias: LMS-92-EWC-9

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	460	ug/L		1300	07/20/21 12:18	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:18	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-39
Name: 42. Kitchen South Faucet Serving Area
Alias: LMS-003-KF-1

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	340	ug/L		1300	07/20/21 12:27	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:27	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-41
Name: 45. Room 229
Alias: LMS-229-DWF-11

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	130	ug/L		1300	07/21/21 14:47	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/21/21 14:47	TJJ	EPA 200.8 REV 5.4



ANALYTICAL RESULTS

Sample: EG03510-42
Name: 46. Room 227
Alias: LMS-227-DWF-12

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	130	ug/L		1300	07/20/21 12:30	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:30	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-43
Name: 47. Room 225
Alias: LMS-225-DWF-13

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	150	ug/L		1300	07/20/21 12:31	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:31	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-44
Name: 48. Room 223
Alias: LMS-223-DWF-14

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	130	ug/L		1300	07/20/21 12:33	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:33	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-45
Name: 49. Room 222
Alias: LMS-222-CF-21

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	220	ug/L		1300	07/20/21 12:34	TJJ	EPA 200.8 REV 5.4
Lead	2.7	ug/L		15	07/20/21 12:34	TJJ	EPA 200.8 REV 5.4



ANALYTICAL RESULTS

Sample: EG03510-46
Name: 50. Room 224
Alias: LMS-224-CF-22

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	200	ug/L		1300	07/20/21 12:36	TJJ	EPA 200.8 REV 5.4
Lead	1.3	ug/L		15	07/20/21 12:36	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-47
Name: 52. Room 208
Alias: LMS-208-DWF-15

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	180	ug/L		1300	07/20/21 12:37	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:37	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-48
Name: 53. Room 206
Alias: LMS-206-DWF-16

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	170	ug/L		1300	07/20/21 12:48	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:48	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-49
Name: 54. Room 204
Alias: LMS-204-DWF-17

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	130	ug/L		1300	07/20/21 12:49	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:49	TJJ	EPA 200.8 REV 5.4



ANALYTICAL RESULTS

Sample: EG03510-50
Name: 55. Room 202
Alias: LMS-202-DWF-18

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	150	ug/L		1300	07/20/21 12:50	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:50	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-51
Name: 56. Room 201
Alias: LMS-201-CF-23

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	200	ug/L		1300	07/20/21 12:52	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:52	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-52
Name: 57. Kitchen West Faucet - Serving Area
Alias: LMS-003-KF-2

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	220	ug/L		1300	07/20/21 12:53	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:53	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-53
Name: 58. Kitchen Large Double Sinks
Alias: LMS-005-KF-3

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	300	ug/L		1300	07/20/21 12:55	TJJ	EPA 200.8 REV 5.4
Lead	3.5	ug/L		15	07/20/21 12:55	TJJ	EPA 200.8 REV 5.4



ANALYTICAL RESULTS

Sample: EG03510-54
Name: 59. Room 112
Alias: LMS-112-CF-23

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	150	ug/L		1300	07/20/21 12:56	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 12:56	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-55
Name: 60. Media Center Office Faucet
Alias: LMS-MS-CF

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	420	ug/L		1300	07/20/21 12:58	TJJ	EPA 200.8 REV 5.4
Lead	7.8	ug/L		15	07/20/21 12:58	TJJ	EPA 200.8 REV 5.4

Sample: EG03510-56
Name: 61. Room 203
Alias: LMS-203-CF-24

Sampled: 07/15/21 05:45
Received: 07/19/21 09:38
Matrix: Drinking Water - Grab

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
Total Metals - PIA							
Copper	150	ug/L		1300	07/20/21 14:01	TJJ	EPA 200.8 REV 5.4
Lead	< 1.0	ug/L		15	07/20/21 14:01	TJJ	EPA 200.8 REV 5.4



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





PDC LABORATORIES, INC.
WWW.PDCLAB.COM

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

CHAIN OF CUSTODY RECORD

STATE WHERE SAMPLE COLLECTED MO

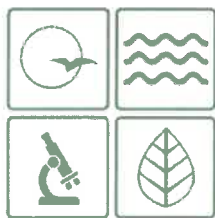
ALL HIGHLIGHTED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT)

1 CLIENT Engineering Surveys & Services ADDRESS 1113 Fay Street CITY Columbia, MO STATE ZIP CONTACT PERSON Josh Lehmen		PROJECT NUMBER L14571 PHONE NUMBER 573-449-2646		PROJECT LOCATION Columbia, MO E-MAIL jlehmen@ess-inc.com		PURCHASE ORDER # 7-16-21		3 ANALYSIS REQUESTED <div>Lead & Copper</div>				4 (FOR LAB USE ONLY) LOGIN # EG103510-56 LOGGED BY OCW CLIENT: PROJECT: PROJ. MGR.: CUSTODY SEAL #:	
2 SAMPLE DESCRIPTION (UNIQUE DESCRIPTION AS IT WILL APPEAR ON THE ANALYTICAL REPORT) Lange Middle School		DATE COLLECTED 7/15/21	TIME COLLECTED Various	SAMPLE TYPE GRAB X		MATRIX TYPE	BOTTLE COUNT 56	PRES CODE CLIENT PROVIDED					REMARKS
CHEMICAL PRESERVATION CODES: 1 - HCL 2 - H2SO4 3 - HNO3 4 - NAOH 5 - NA2S2O3 6 - UNPRESERVED 7 - OTHER													
5 TURNAROUND TIME REQUESTED (PLEASE CIRCLE) NORMAL RUSH (RUSH TAT IS SUBJECT TO PDC LABS APPROVAL AND SURCHARGE) RUSH RESULTS VIA (PLEASE CIRCLE) EMAIL PHONE EMAIL IF DIFFERENT FROM ABOVE: PHONE # IF DIFFERENT FROM ABOVE:				DATE RESULTS NEEDED		6 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)							
7 RELINQUISHED BY: (SIGNATURE) RELINQUISHED BY: (SIGNATURE) RELINQUISHED BY: (SIGNATURE)		DATE 7/16/21 TIME 10:13 AM DATE 7/19/21 TIME 1:50 PM DATE TIME	RECEIVED BY: (SIGNATURE) RECEIVED BY: (SIGNATURE) RECEIVED BY: (SIGNATURE)		DATE 7/19/21 TIME 10:45 DATE 7/19/21 TIME 1:50		8 COMMENTS: (FOR LAB USE ONLY) SAMPLE TEMPERATURE UPON RECEIPT 20.3 °C CHILL PROCESS STARTED PRIOR TO RECEIPT Y OR N SAMPLE(S) RECEIVED ON ICE Y OR N SAMPLE ACCEPTANCE NONCONFORMANT REPORT IS NEEDED Y OR N DATE AND TIME TAKEN FROM SAMPLE BOTTLE						

Location:	Lange Middle School
Sample Date:	7/15/2021
Sample Time:	Various
Sampled By:	Josh Lehmen

Sample No.	Coding System	Description	Sample Collected
1	LMS-04-NSF-1	Room 04 - Nurse Sink Faucet	Yes
2	LMS-94-TLF-1	Room 94 - Teacher Lounge Faucet	Yes
3	LMS-95-CF-1	Room 95 - Classroom Faucet	Yes
4	LMS-96-EWC-1	By Conncession Stand - Not Installed	Yes
5	LMS-H108-EWC-2	Hall By 108 - Electric Water Cooler - Not Installed	No
6	LMS-108-DWF-1	Room 108 - Drinking Water Fountain	Yes
7	LMS-106-DWF-2	Room 106 - Drinking Water Fountain	Yes
8	LMS-104-DWF-3	Room 104 - Drinking Water Fountain	Yes
9	LMS-102-DWF-4	Room 102 - Drinking Water Fountain	Yes
10	LMS-103-CF-2	Room 103 - Classroom Faucet	Yes
11	LMS-H129-EWC-3	Hall By 129 - Electric Water Cooler - Not Installed	No
12	LMS-129-DWF-5	Room 129 - Drinking Water Fountain	Yes
13	LMS-127-DWF-6	Room 127 - Drinking Water Fountain	Yes
14	LMS-125-DWF-7	Room 125 - Drinking Water Fountain	Yes
15	LMS-123-DWF-8	Room 123 - Drinking Water Fountain	Yes
16	LMS-122-CF-3	Room 122 - Classroom Faucet	Yes
17	LMS-124-CF-4	Room 124 - Classroom Faucet	Yes
18	LMS-110-TLF-2	Teachers Lounge Rm 110	Yes
19	LMS-160-DWF-9	Room 160 - Drinking Water Fountain	Yes
20	LMS-162-CF-5	Room 162 - Classroom Faucet	Yes
21	LMS-164-CF-6	Room 164 - Classroom Faucet	Yes
22	LMS-166-CF-7	Room 166 - Classroom Faucet	Yes
23	LMS-168-CF-8	Room 168 - Classroom Faucet	Yes
24	LMS-170-CF-9	Room 170 - Classroom Faucet	Yes
25	LMS-167-CF-10	Room 167 - Classroom Faucet East	Yes
26	LMS-167-CF-11	Room 167 - Classroom Faucet West	Yes
27	LMS-165-CF-12	Room 165 - Classroom Faucet East	Yes
28	LMS-165-CF-13	Room 165 - Classroom Faucet West	Yes
29	LMS-H115-EWC-4	Hall By 115 - Electric Water Cooler	Yes
30	LMS-115-DWF-10	Room 115 - Drinking Water Fountain	Yes
31	LMS-117-CF-14	Room 117 - Classroom Faucet	Yes
32	LMS-119-CF-15	Room 119 - Classroom Faucet	Yes
33	LMS-118-CF-16	Room 118 - Classroom Faucet	Yes
34	LMS-116-CF-17	Room 116 - Classroom Faucet West	Yes
35	LMS-116-CF-18	Room 116 - Classroom Faucet Center	Yes
36	LMS-116-CF-19	Room 116 - Classroom Faucet East	Yes
37	LMS-120-EWC-5	Girls Locker - Electric Water Cooler	Yes
38	LMS-121-EWC-6	Boys Locker - Electric Water Cooler	Yes
39	LMS-90-EWC-7	Room 90 - Electric Water Cooler	Yes
40	LMS-91-EWC-8	Room 91 - Electric Water Cooler	Yes

41	LMS-92-EWC-9	Room 92 - Electric Water Cooler	Yes
42	LMS-003-KF-1	Kitchen - Drinking Water Fountain	Yes
43	LMS-004-CF-20	Room 004 - Classroom Faucet	Yes
44	LMS-H229-EWC-10	Hall by 229 - Electric Water Cooler	Yes
45	LMS-229-DWF-11	Room 229 - Drinking Water Fountain - Not Installed	No
46	LMS-227-DWF-12	Room 227 - Drinking Water Fountain	Yes
47	LMS-225-DWF-13	Room 225 - Drinking Water Fountain	Yes
48	LMS-223-DWF-14	Room 223 - Drinking Water Fountain	Yes
49	LMS-222-CF-21	Room 222 - Classroom Faucet	Yes
50	LMS-224-CF-22	Room 224 - Classroom Faucet	Yes
51	LMS-H208-EWC-11	Hall by 208 - Electric Water Cooler - Not Installed	No
52	LMS-208-DWF-15	Room 208 - Drinking Water Fountain	Yes
53	LMS-206-DWF-16	Room 206 - Drinking Water Fountain	Yes
54	LMS-204-DWF-17	Room 204 - Drinking Water Fountain	Yes
55	LMS-202-DWF-18	Room 202 - Drinking Water Fountain	Yes
56	LMS-201-CF-23	Room 201 - Classroom Faucet	Yes
57	LMS-003-KF-2	Room 003 - Kitchen Facucet West Serving Area	Yes
58	LMS-003-KF-3	Room 003 - Kitchen Facucet Large Double Sink	Yes
59	LMS-112-CF-24	Room 112 - Classroom Faucet	Yes
60	LMS-MC-CF-25	Media Center - Classroom Faucet Office	Yes
61	LMS-203-CF26	Room 203 - Classroom Faucet	Yes



Missouri Department of 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

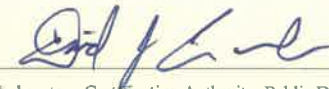
Pace Analytical Services, LLC – Peoria, Illinois

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