



# CERTIFICATE OF ANALYSIS

**Chain of Custody:** 642606  
**Client:** Howard County Public School System  
**Address:** 10910 Route 108  
Ellicott City, MD 21042  
**Attention:** Jeff Klenk

**Job Name:** Long Reach High School  
**Job Location:** 6101 Old Dobbin Lane Columbia  
21045  
**Job Number:** 13.055  
**P.O. Number:** Not Provided

**Date Submitted:** 12/22/2022  
**Date Analyzed:** 01/18/2023  
**Report Date:** 01/20/2023  
**Date Sampled:** 12/22/2022 - 01/12/2023  
**Person Submitting:** Jeff Klenk

## Summary of Drinking Water Analysis for Metals

AMA Sample Number	Client Sample Number	Sample Collection Information		Analysis Type	Sample Analyte	Reporting Limit	Final Result	Comments
		Date/Time	Location					
642606-1	LRHS 1 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Kitchen, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	2.3 ug/L	
642606-2	LRHS 2 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Kitchen, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	1.3 ug/L	
642606-3	LRHS 4 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Kitchen, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	0.75 ug/L	
642606-4	LRHS 5 First-Draw	12/22/2022 5:05 am	Commercial Kitchen Kettle, Cold (i.e., faucet leading into kettle), Consumption, Kitchen, , Kettle, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	3.4 ug/L	
642606-5	LRHS 6 First-Draw	12/22/2022 5:05 am	Bottle Filler/Drinking Fountain Combo Unit - Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-6	LRHS 7 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-7	LRHS 8 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-8	LRHS 9 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Nurse's Office/Health Room, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	5.7 ug/L	This results meets or exceeds the 5.5ppb action level as established by MDE for schools.
642606-9	LRHS 10 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Staff Workroom, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	1.7 ug/L	
642606-10	LRHS 11 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Staff Workroom, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-11	LRHS 13 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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642606-12	LRHS 14 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-13	LRHS 15 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-14	LRHS 16 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-15	LRHS 17 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-16	LRHS 18 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-17	LRHS 19 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-18	LRHS 20 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Concessions, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	0.88 ug/L	
642606-19	LRHS 21 First-Draw	12/22/2022 5:05 am	Bottle Filler/Drinking Fountain Combo Unit - Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-20	LRHS 22 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-21	LRHS 23 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Locker Room, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	1.7 ug/L	
642606-22	LRHS 24 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Locker Room, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	2.6 ug/L	
642606-23	LRHS 25 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-24	LRHS 26 First-Draw	12/22/2022 5:05 am	Ice Machine (Stand Alone), Consumption, Weight/Training/Fitness Room, , Ice Maker, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-25	LRHS 27 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Teachers' Lounge/Break Room, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	0.56 ug/L	



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642606-26	LRHS 28 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Teachers' Lounge/Break Room, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-27	LRHS 29 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-28	LRHS 30 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-29	LRHS 32 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-30	LRHS 33 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Classroom, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	0.67 ug/L	
642606-31	LRHS 36 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-32	LRHS 37 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Classroom (Home Economics), , Sink, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-33	LRHS 38 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Classroom (Home Economics), , Sink, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-34	LRHS 39 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Classroom (Home Economics), , Sink, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	0.61 ug/L	
642606-35	LRHS 40 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Classroom (Home Economics), , Sink, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	1.7 ug/L	
642606-36	LRHS 41 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Classroom (Home Economics), , Sink, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	2.7 ug/L	
642606-37	LRHS 42 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Classroom (Home Economics), , Sink, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-38	LRHS 43 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Classroom (Home Economics), , Sink, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	2.5 ug/L	



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642606-39	LRHS 44 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Classroom (Home Economics), , Sink, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	11 ug/L	10.6 ug/L. This result meets or exceeds the 5.5ppb action level as established by MDE for schools.
642606-40	LRHS 45 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Teachers' Lounge/Break Room, , Sink, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-41	LRHS 46 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-42	LRHS 48 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-43	LRHS 49 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-44	LRHS 50 First-Draw	12/22/2022 5:05 am	Bottle Filler/Drinking Fountain Combo Unit - Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-45	LRHS 51 First-Draw	12/22/2022 5:05 am	Bottle Filler/Drinking Fountain Combo Unit - Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Media Center, , Fountain, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	0.72 ug/L	
642606-46	LRHS 54 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 3rd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-47	LRHS 55 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 3rd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-48	LRHS 58 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 3rd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-49	LRHS 59 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Teachers' Lounge/Break Room, , Sink, Main Bldg, 3rd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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642606-50	LRHS 61 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 3rd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-51	LRHS 62 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 3rd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-52	LRHS 63 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 3rd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-53	LRHS 68 First-Draw	12/22/2022 5:05 am	Faucet, Cold, Consumption, Teachers' Lounge/Break Room, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	0.56 ug/L	
642606-54	LRHS 69 First-Draw	12/22/2022 5:05 am	Drinking Water Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-55	LRHS 6BW First-Draw	01/12/2023 6:20 am	Bottle Filler/Drinking Fountain Combo Unit - Bottle Filler, Consumption, Hallway, , Chiller Style, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	0.93 ug/L	
642606-56	LRHS 21BW First-Draw	01/12/2023 6:20 am	Bottle Filler/Drinking Fountain Combo Unit - Bottle Filler, Consumption, Hallway, , Chiller Style, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-57	LRHS 50BW First-Draw	01/12/2023 6:20 am	Bottle Filler/Drinking Fountain Combo Unit - Bottle Filler, Consumption, Hallway, , Chiller Style, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-58	LRHS 51BW First-Draw	01/12/2023 6:20 am	Bottle Filler/Drinking Fountain Combo Unit - Bottle Filler, Consumption, Media Center, , Chiller Style, Main Bldg, 2nd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642606-59	LRHS 67 Flush	01/12/2023 6:20 am	Faucet, Cold, Consumption, Kitchen, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	0.7 ug/L	0.70 ug/L.
642606-60	LRHS 70BW First-Draw	01/12/2023 6:20 am	Bottle Filler/Drinking Fountain Combo Unit - Bottle Filler, Consumption, Hallway, , Chiller Style, Main Bldg, 3rd Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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**Analysis Methods:** Flame AA: APHA SM3111B (1999, 22nd Ed.), Furnace AA: APHA SM3113B (2010, 22nd Ed.), ICP: EPA 200.8 (Rev. 5.4)

mg/L = Parts Per Million (ppm), N/A = Not Applicable, µg/L = Parts Per Billion, N/P = Not Provided

**Analyst(s):** Jean-Paul Littleton

**Sample Collector:** Jackson Holtzman  
**Certification:**

All results are to be considered preliminary and subject to change unless signed by the Technical Director or Deputy.

**Technical Director** George Land

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations, and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. This report must not be used to claim, and does not imply product certification, approval, or endorsement by NY ELAP, AIHA-LAP, or any agency of the Federal Government. All rights reserved. AMA Analytical Services, Inc.