



CERTIFICATE OF ANALYSIS

Chain of Custody: 642031
Client: Howard County Public School System
Address: 10910 Route 108
Ellicott City, MD 21042
Attention: Jeff Klenk

Job Name: Swansfield Elementary School
Job Location: 5610 Cedar Lane, Columbia, MD
21044
Job Number: 13.023
P.O. Number: Not Provided

Date Submitted: 12/02/2022
Date Analyzed: 12/20/2022
Report Date: 12/21/2022
Date Sampled: 12/01/2022 & 12/2/2022 JK
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					
642031-1	SWES 1 First-Draw	12/01/2022 6:50 am	Faucet, Cold, Consumption, Kitchen, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-2	SWES 2 First-Draw	12/01/2022 6:50 am	Faucet, Cold, Consumption, Kitchen, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-3	SWES 3F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubbler Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-4	SWES 4F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubbler Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-5	SWES 5 First-Draw	12/01/2022 6:50 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	
642031-6	SWES 6 First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Cooler/Chiller Style (Refrigerated), Consumption, Hallway, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-7	SWES 6BW First-Draw	12/02/2022 7:05 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	
642031-8	SWES 7 First-Draw	12/01/2022 6:50 am	Faucet, Cold, Consumption, Teachers' Lounge/Break Room, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-9	SWES 8F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubbler Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-10	SWES 9F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubbler Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-11	SWES 10F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubbler Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-12	SWES 11F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubbler Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-13	SWES 12F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubbler Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-14	SWES 13F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubbler Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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642031-15	SWES 14F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-16	SWES 15F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-17	SWES 16F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-18	SWES 17F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-19	SWES 18F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-20	SWES 19F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-21	SWES 20F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-22	SWES 21F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-23	SWES 22F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-24	SWES 23 First-Draw	12/01/2022 6:50 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	
642031-25	SWES 24 First-Draw	12/01/2022 6:50 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	
642031-26	SWES 24BW First-Draw	12/02/2022 7:05 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	
642031-27	SWES 25F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-28	SWES 26F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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642031-29	SWES 27F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-30	SWES 28F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-31	SWES 29F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-32	SWES 30F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-33	SWES 31F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-34	SWES 32F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-35	SWES 33F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-36	SWES 34F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-37	SWES 35F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-38	SWES 36F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-39	SWES 37F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-40	SWES 38F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-41	SWES 39 First-Draw	12/01/2022 6:50 am	Faucet, Cold, Consumption, Nurse's Office/Health Room, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-42	SWES 40F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubblers Style (Non-Refrigerated), Consumption, Nurse's Office/Health Room, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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642031-43	SWES 40S First-Draw	12/02/2022 7:05 am	Combination Sink - Faucet, Cold, Consumption, Nurse's Office/Health Room, , Sink, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-44	SWES 41F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubbler Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-45	SWES 42F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubbler Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-46	SWES 43F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubbler Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-47	SWES 44F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubbler Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
642031-48	SWES 45F First-Draw	12/01/2022 6:50 am	Combination Sink - Fountain - Bubbler Style (Non-Refrigerated), Consumption, Classroom, , Fountain, Main Bldg, 1st Floor	ICP	Lead	0.5 ug/L	< 0.5 ug/L	

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

Sample Collector: Jeff Klenk (BWs & 40S) & Jackson Holtzman (all others)

Certification:

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

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

Analyst(s): Jean-Paul Littleton

Technical Director Jean-Paul Littleton

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