



# CERTIFICATE OF ANALYSIS

**Chain of Custody:** 612165  
**Client:** Howard County Public School System  
**Address:** 10910 Route 108  
Ellicott City, MD 21042  
**Attention:** Jeff Klenk

**Job Name:** West Friendship Elementary School  
**Job Location:** 12500 MD-144, West Friendship, MD  
21794  
**Job Number:** 13.032  
**P.O. Number:** Not Provided

**Date Submitted:** 12/21/2018  
**Date Analyzed:** 12/31/2018  
**Report Date:** 01/02/2019  
**Date Sampled:** 12/13/2018 - 12/14/2018  
**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					
612165-1	WFES 2 1st Draw	12/13/2018 5:15 am	DF/C	ICP	Lead	0.5 ug/L	0.51 ug/L	
612165-2	WFES 4F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	2.1 ug/L	
612165-3	WFES 5F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	2.5 ug/L	
612165-4	WFES 6F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	3.3 ug/L	
612165-5	WFES 7F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	6.5 ug/L	
612165-6	WFES 8F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	3.1 ug/L	
612165-7	WFES 9 1st Draw	12/13/2018 5:15 am	DF/C	ICP	Lead	0.5 ug/L	0.63 ug/L	
612165-8	WFES 10F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	2 ug/L	
612165-9	WFES 11F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	2.5 ug/L	
612165-10	WFES 12F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	1.3 ug/L	
612165-11	WFES 13F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	4.4 ug/L	
612165-12	WFES 14F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	1.1 ug/L	
612165-13	WFES 16F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	1.3 ug/L	
612165-14	WFES 17F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	1.4 ug/L	
612165-15	WFES 18F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	1 ug/L	
612165-16	WFES 19F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	0.83 ug/L	
612165-17	WFES 20F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	0.76 ug/L	
612165-18	WFES 21F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	1.7 ug/L	
612165-19	WFES 22F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	1.2 ug/L	
612165-20	WFES 23F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	1.4 ug/L	



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612165-21	WFES 24F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	1.4 ug/L	
612165-22	WFES 25 1st Draw	12/13/2018 5:15 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612165-23	WFES 26F 1st Draw	12/13/2018 5:15 am	DF/B	ICP	Lead	0.5 ug/L	1.4 ug/L	
612165-24	WFES 27F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	0.95 ug/L	
612165-25	WFES 28F 1st Draw	12/13/2018 5:15 am	CC/B	ICP	Lead	0.5 ug/L	0.97 ug/L	
612165-26	WFES 29 1st Draw	12/13/2018 5:15 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612165-27	WFES 31 1st Draw	12/13/2018 5:15 am	DF/C	ICP	Lead	0.5 ug/L	0.76 ug/L	
612165-28	WFES 1 1st Draw	12/14/2018 5:43 am	KS	ICP	Lead	0.5 ug/L	14 ug/L	14.3 ug/L.
612165-29	WFES 3 1st Draw	12/14/2018 5:43 am	TL	ICP	Lead	0.5 ug/L	1 ug/L	
612165-30	WFES 4S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	5.5 ug/L	
612165-31	WFES 5S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	3.5 ug/L	
612165-32	WFES 6S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	2.4 ug/L	
612165-33	WFES 7S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	6.5 ug/L	
612165-34	WFES 8S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	4.6 ug/L	
612165-35	WFES 10S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	3.1 ug/L	
612165-36	WFES 11S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	3.4 ug/L	
612165-37	WFES 12S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	2.1 ug/L	
612165-38	WFES 13S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	4.1 ug/L	
612165-39	WFES 14S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	2.7 ug/L	
612165-40	WFES 15 1st Draw	12/14/2018 5:43 am	OT.7	ICP	Lead	0.5 ug/L	9.9 ug/L	



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<b>Client:</b> Howard County Public School System	<b>Job Location:</b> 12500 MD-144, West Friendship, MD 21794	<b>Date Analyzed:</b> 12/31/2018
<b>Address:</b> 10910 Route 108 Ellicott City, MD 21042	<b>Job Number:</b> 13.032	<b>Report Date:</b> 01/02/2019
<b>Attention:</b> Jeff Klenk	<b>P.O. Number:</b> Not Provided	<b>Date Sampled:</b> 12/13/2018 - 12/14/2018
		<b>Person Submitting:</b> 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					
612165-41	WFES 16S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	2.1 ug/L	
612165-42	WFES 17S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	3.6 ug/L	
612165-43	WFES 18S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	2.4 ug/L	
612165-44	WFES 19S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	2 ug/L	
612165-45	WFES 20S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	2.6 ug/L	
612165-46	WFES 21S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	3.9 ug/L	
612165-47	WFES 22S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	2.2 ug/L	
612165-48	WFES 23S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	2 ug/L	
612165-49	WFES 24S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	3.9 ug/L	
612165-50	WFES 26S 1st Draw	12/14/2018 5:43 am	NO	ICP	Lead	0.5 ug/L	3.1 ug/L	
612165-51	WFES 27S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	3 ug/L	
612165-52	WFES 28S 1st Draw	12/14/2018 5:43 am	CC/S	ICP	Lead	0.5 ug/L	2.5 ug/L	
612165-53	WFES 30 1st Draw	12/14/2018 5:43 am	CR	ICP	Lead	0.5 ug/L	6.2 ug/L	
612165-54	WFES 32 1st Draw	12/14/2018 5:43 am	IM	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:** Jeff Klenk  
**Certification:**

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

**Technical Director** G. Edward Carney

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