



# CERTIFICATE OF ANALYSIS

**Chain of Custody:** 611926  
**Client:** Howard County Public School System  
**Address:** 10910 Route 108  
Ellicott City, MD 21042  
**Attention:** Jeff Klenk

**Job Name:** Bellows Spring Elementary School  
**Job Location:** 8125 Old Stockbridge Drive, Ellicott  
City, MD 21043  
**Job Number:** 13.078  
**P.O. Number:** Not Provided

**Date Submitted:** 12/10/2018  
**Date Analyzed:** 12/16/2018  
**Report Date:** 12/17/2018  
**Date Sampled:** 12/05/2018 - 12/06/2018  
**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					
611926-1	BSES 3 1st	12/05/2018 6:15 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-2	BSES 4 1st	12/05/2018 6:15 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-3	BSES 5 1st	12/05/2018 6:15 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-4	BSES 9F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-5	BSES 10F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-6	BSES 11F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-7	BSES 12F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-8	BSES 13F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-9	BSES 14F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-10	BSES 17F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	0.7 ug/L	
611926-11	BSES 18F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	3 ug/L	
611926-12	BSES 19 1st	12/05/2018 6:15 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-13	BSES 20F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	0.75 ug/L	
611926-14	BSES 21F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	0.59 ug/L	
611926-15	BSES 22F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	0.72 ug/L	
611926-16	BSES 24F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-17	BSES 25F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-18	BSES 27F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-19	BSES 28F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-20	BSES 29F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	9.5 ug/L	



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611926-21	BSES 30F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-22	BSES 31F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-23	BSES 33F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-24	BSES 34F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	0.76 ug/L	
611926-25	BSES 35 1st	12/05/2018 6:15 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-26	BSES 36F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	2.4 ug/L	
611926-27	BSES 39F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	1.1 ug/L	
611926-28	BSES 40F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	0.59 ug/L	
611926-29	BSES 41F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	3.2 ug/L	
611926-30	BSES 42F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	1.4 ug/L	
611926-31	BSES 43 1st	12/05/2018 6:15 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-32	BSES 44F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-33	BSES 45F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-34	BSES 50F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-35	BSES 51F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-36	BSES 53F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	0.76 ug/L	
611926-37	BSES 54F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-38	BSES 55F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	0.51 ug/L	
611926-39	BSES 56F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-40	BSES 57F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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611926-41	BSES 59F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-42	BSES 60F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-43	BSES 61F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	0.63 ug/L	
611926-44	BSES 62F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-45	BSES 63F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-46	BSES 65F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-47	BSES 66F 1st	12/05/2018 6:15 am	CC/B	ICP	Lead	0.5 ug/L	0.5 ug/L	
611926-48	BSES 68 1st	12/05/2018 6:15 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-49	BSES 1 1st	12/05/2018 6:15 am	KS	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-50	BSES 2 1st	12/05/2018 6:15 am	IM	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-51	BSES 7 1st	12/05/2018 6:15 am	NO	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-52	BSES 8 1st	12/05/2018 6:15 am	NO	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-53	BSES 9S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-54	BSES 10S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	1.1 ug/L	
611926-55	BSES 11S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-56	BSES 12S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-57	BSES 13S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.57 ug/L	
611926-58	BSES 14S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.62 ug/L	
611926-59	BSES 15 1st	12/05/2018 6:15 am	TL	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-60	BSES 17S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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		Date/Time	Location					
611926-61	BSES 18S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.6 ug/L	
611926-62	BSES 20S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.62 ug/L	
611926-63	BSES 21S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-64	BSES 22S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-65	BSES 24S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.56 ug/L	
611926-66	BSES 25S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-67	BSES 26 1st	12/05/2018 6:15 am	CR	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-68	BSES 27S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-69	BSES 28S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.6 ug/L	
611926-70	BSES 29S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	3.4 ug/L	
611926-71	BSES 30S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.51 ug/L	
611926-72	BSES 31S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	2.3 ug/L	
611926-73	BSES 32 1st	12/05/2018 6:15 am	CR	ICP	Lead	0.5 ug/L	1.2 ug/L	
611926-74	BSES 33S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	3.3 ug/L	
611926-75	BSES 34S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	1.3 ug/L	
611926-76	BSES 36S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-77	BSES 37 1st	12/05/2018 6:15 am	CR	ICP	Lead	0.5 ug/L	1.6 ug/L	
611926-78	BSES 38 1st	12/05/2018 6:15 am	CR	ICP	Lead	0.5 ug/L	1.3 ug/L	
611926-79	BSES 39S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-80	BSES 40S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.68 ug/L	



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611926-81	BSES 41S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-82	BSES 42S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.7 ug/L	
611926-83	BSES 44S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	1.7 ug/L	
611926-84	BSES 45S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-85	BSES 46 1st	12/05/2018 6:15 am	CR	ICP	Lead	0.5 ug/L	2.1 ug/L	
611926-86	BSES 47 1st	12/05/2018 6:15 am	CR	ICP	Lead	0.5 ug/L	2.7 ug/L	
611926-87	BSES 48 1st	12/05/2018 6:15 am	CR	ICP	Lead	0.5 ug/L	2.3 ug/L	
611926-88	BSES 49 1st	12/05/2018 6:15 am	CR	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-89	BSES 50S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.56 ug/L	
611926-90	BSES 51S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-91	BSES 52 1st	12/05/2018 6:15 am	CR	ICP	Lead	0.5 ug/L	1.9 ug/L	
611926-92	BSES 53S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	1.8 ug/L	
611926-93	BSES 54S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.71 ug/L	
611926-94	BSES 55S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	1.2 ug/L	
611926-95	BSES 56S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.71 ug/L	
611926-96	BSES 57S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.7 ug/L	
611926-97	BSES 58 1st	12/05/2018 6:15 am	CR	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-98	BSES 59S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-99	BSES 60S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.71 ug/L	
611926-100	BSES 61S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	1.2 ug/L	



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611926-101	BSES 62S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.88 ug/L	
611926-102	BSES 63S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	1.2 ug/L	
611926-103	BSES 64 1st	12/05/2018 6:15 am	CR	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-104	BSES 65S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.88 ug/L	
611926-105	BSES 66S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	0.63 ug/L	
611926-106	BSES 67S 1st	12/05/2018 6:15 am	CC/S	ICP	Lead	0.5 ug/L	8.7 ug/L	
611926-107	BSES 6 1st	12/05/2018 6:15 am	OT.2	ICP	Lead	0.5 ug/L	1.2 ug/L	
611926-108	BSES 16 1st	12/05/2018 6:15 am	OT.4	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
611926-109	BSES 23 1st	12/05/2018 6:15 am	CR	ICP	Lead	0.5 ug/L	0.72 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

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.