



CERTIFICATE OF ANALYSIS

Chain of Custody: 613507
Client: Howard County Public School System
Address: 10910 Route 108
Ellicott City, MD 21042
Attention: Jeff Klenk

Job Name: Elkridge Elementary School
Job Location: 7075 Montgomery Road, Elkridge, MD
21075
Job Number: 13.020
P.O. Number: Not Provided

Date Submitted: 03/08/2019
Date Analyzed: 03/15/2019
Report Date: 03/15/2019
Date Sampled: 02/28/2019
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					
613507-1	EES 3 1st Draw	02/28/2019 5:02 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-2	EES 6F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-3	EES 7F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-4	EES 8 1st Draw	02/28/2019 5:02 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-5	EES 12F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	0.55 ug/L	
613507-6	EES 13F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-7	EES 14F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	1.6 ug/L	
613507-8	EES 15F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-9	EES 16F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	0.52 ug/L	
613507-10	EES 17F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-11	EES 18F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-12	EES 19F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	2.9 ug/L	
613507-13	EES 20F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	1.4 ug/L	
613507-14	EES 21F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	1.2 ug/L	
613507-15	EES 22F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	0.85 ug/L	
613507-16	EES 23F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	1.4 ug/L	
613507-17	EES 24F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	1.5 ug/L	
613507-18	EES 26F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-19	EES 27F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-20	EES 28F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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613507-21	EES 29F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	1.7 ug/L	
613507-22	EES 30F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-23	EES 31F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	0.64 ug/L	
613507-24	EES 32 1st Draw	02/28/2019 5:02 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-25	EES 33 1st Draw	02/28/2019 5:02 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-26	EES 34F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-27	EES 35F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-28	EES 36F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-29	EES 37F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-30	EES 39F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-31	EES 40F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-32	EES 41F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-33	EES 42F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	0.53 ug/L	
613507-34	EES 43 1st Draw	02/28/2019 5:02 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-35	EES 44 1st Draw	02/28/2019 5:02 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-36	EES 46F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-37	EES 47F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-38	EES 48F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	0.72 ug/L	
613507-39	EES 49F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-40	EES 50F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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613507-41	EES 51F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	1.6 ug/L	
613507-42	EES 52F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	1.5 ug/L	
613507-43	EES 53F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	1 ug/L	
613507-44	EES 54F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-45	EES 55F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-46	EES 56F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	0.85 ug/L	
613507-47	EES 57F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	0.88 ug/L	
613507-48	EES 58F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	0.56 ug/L	
613507-49	EES 59F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-50	EES 60F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	0.76 ug/L	
613507-51	EES 61F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-52	EES 62F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-53	EES 63F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-54	EES 64F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	0.61 ug/L	
613507-55	EES 65F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-56	EES 66F 1st Draw	02/28/2019 5:02 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-57	EES 1 1st Draw	03/01/2019 5:15 am	IM	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-58	EES 2 1st Draw	03/01/2019 5:15 am	KS	ICP	Lead	0.5 ug/L	3.1 ug/L	
613507-59	EES 4 1st Draw	03/01/2019 5:15 am	NO	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-60	EES 5 1st Draw	03/01/2019 5:15 am	CR	ICP	Lead	0.5 ug/L	2.3 ug/L	



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		Date/Time	Location					
613507-61	EES 6S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-62	EES 7S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-63	EES 9 1st Draw	03/01/2019 5:15 am	TL	ICP	Lead	0.5 ug/L	0.69 ug/L	
613507-64	EES 10 1st Draw	03/01/2019 5:15 am	OT.4	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-65	EES 11 1st Draw	03/01/2019 5:15 am	OT.2	ICP	Lead	0.5 ug/L	0.84 ug/L	
613507-66	EES 12S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	3.4 ug/L	
613507-67	EES 13S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-68	EES 14S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	1.6 ug/L	
613507-69	EES 15S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-70	EES 16S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	0.84 ug/L	
613507-71	EES 17S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	1.4 ug/L	
613507-72	EES 18S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-73	EES 19S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	2 ug/L	
613507-74	EES 20S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	0.56 ug/L	
613507-75	EES 21S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	2.1 ug/L	
613507-76	EES 22S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	0.74 ug/L	
613507-77	EES 23S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	3.3 ug/L	
613507-78	EES 24S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	2.7 ug/L	
613507-79	EES 25 1st Draw	03/01/2019 5:15 am	CR	ICP	Lead	0.5 ug/L	5.1 ug/L	
613507-80	EES 26S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	0.97 ug/L	



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613507-81	EES 27S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	3.1 ug/L	
613507-82	EES 28S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	1.9 ug/L	
613507-83	EES 29S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	1.2 ug/L	
613507-84	EES 30S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	0.64 ug/L	
613507-85	EES 31S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	0.87 ug/L	
613507-86	EES 34S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	1.8 ug/L	
613507-87	EES 35S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	2.3 ug/L	
613507-88	EES 36S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	1.6 ug/L	
613507-89	EES 37S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	0.56 ug/L	
613507-90	EES 39S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	0.9 ug/L	
613507-91	EES 40S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	2.3 ug/L	
613507-92	EES 41S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	2.1 ug/L	
613507-93	EES 42S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	5.6 ug/L	
613507-94	EES 45 1st Draw	03/01/2019 5:15 am	TL	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-95	EES 46S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	2.1 ug/L	
613507-96	EES 47S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-97	EES 48S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	2.1 ug/L	
613507-98	EES 49S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	0.7 ug/L	
613507-99	EES 50S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	0.92 ug/L	
613507-100	EES 51S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	6.6 ug/L	



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613507-101	EES 52S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	2.3 ug/L	
613507-102	EES 53S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	1.1 ug/L	
613507-103	EES 54S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613507-104	EES 55S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	2.5 ug/L	
613507-105	EES 56S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	1.1 ug/L	
613507-106	EES 57S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	1.4 ug/L	
613507-107	EES 58S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	1.8 ug/L	
613507-108	EES 59S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	1.7 ug/L	
613507-109	EES 60S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	1.4 ug/L	
613507-110	EES 61S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	1.5 ug/L	
613507-111	EES 62S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	2.3 ug/L	
613507-112	EES 63S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	0.6 ug/L	
613507-113	EES 64S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	0.83 ug/L	
613507-114	EES 65S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	0.83 ug/L	
613507-115	EES 66S 1st Draw	03/01/2019 5:15 am	CC/S	ICP	Lead	0.5 ug/L	0.8 ug/L	
613507-116	EES 67 1st Draw	03/01/2019 5:15 am	NO	ICP	Lead	0.5 ug/L	0.56 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): George Land

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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