



CERTIFICATE OF ANALYSIS

Chain of Custody: 613134
Client: Howard County Public School System
Address: 10910 Route 108
Ellicott City, MD 21042
Attention: Jeff Klenk

Job Name: Northfield Elementary School
Job Location: 9125 Northfield Road, Ellicott City, MD
21042
Job Number: 13.048
P.O. Number: Not Provided

Date Submitted: 02/15/2019
Date Analyzed: 02/19/2019
Report Date: 02/22/2019
Date Sampled: 02/07/2019 - 02/08/2019
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					
613134-1	NFES 2 1st Draw	02/07/2019 5:12 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-2	NFES 4 1st Draw	02/07/2019 5:12 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-3	NFES 5 1st Draw	02/07/2019 5:12 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-4	NFES 9F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-5	NFES 10F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-6	NFES 11F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-7	NFES 12F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-8	NFES 13F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-9	NFES 17F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-10	NFES 18F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-11	NFES 19F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-12	NFES 20F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-13	NFES 21F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-14	NFES 23 1st Draw	02/07/2019 5:12 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-15	NFES 24F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	0.57 ug/L	
613134-16	NFES 25F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	0.54 ug/L	
613134-17	NFES 26F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-18	NFES 27F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-19	NFES 28F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	0.63 ug/L	
613134-20	NFES 29F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	0.69 ug/L	



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613134-21	NFES 30 1st Draw	02/07/2019 5:12 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-22	NFES 32F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	0.94 ug/L	
613134-23	NFES 33F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-24	NFES 34F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-25	NFES 35F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-26	NFES 37F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-27	NFES 39F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-28	NFES 40F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-29	NFES 41F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-30	NFES 42F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-31	NFES 44F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-32	NFES 45F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-33	NFES 46F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-34	NFES 49F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-35	NFES 50F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-36	NFES 51F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-37	NFES 52F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-38	NFES 53F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-39	NFES 54F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-40	NFES 55F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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613134-41	NFES 56F 1st Draw	02/07/2019 5:12 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-42	NFES 57 1st Draw	02/07/2019 5:12 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-43	NFES 58 1st Draw	02/07/2019 5:12 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-44	NFES 1 1st Draw	02/08/2019 5:02 am	KS	ICP	Lead	0.5 ug/L	8.2 ug/L	
613134-45	NFES 3 1st Draw	02/08/2019 5:02 am	TL	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-46	NFES 6 1st Draw	02/08/2019 5:02 am	NO	ICP	Lead	0.5 ug/L	0.7 ug/L	
613134-47	NFES 7 1st Draw	02/08/2019 5:02 am	OT.2	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-48	NFES 8 1st Draw	02/08/2019 5:02 am	CR	ICP	Lead	0.5 ug/L	1.3 ug/L	
613134-49	NFES 9S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	0.9 ug/L	
613134-50	NFES 10S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	0.65 ug/L	
613134-51	NFES 11S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-52	NFES 12S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	0.83 ug/L	
613134-53	NFES 13S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	0.87 ug/L	
613134-54	NFES 14 1st Draw	02/08/2019 5:02 am	OT.7	ICP	Lead	0.5 ug/L	0.53 ug/L	
613134-55	NFES 15 1st Draw	02/08/2019 5:02 am	CR	ICP	Lead	0.5 ug/L	1.8 ug/L	
613134-56	NFES 16 1st Draw	02/08/2019 5:02 am	CR	ICP	Lead	0.5 ug/L	1.2 ug/L	
613134-57	NFES 17S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-58	NFES 18S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	1.1 ug/L	
613134-59	NFES 19S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-60	NFES 20S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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		Date/Time	Location					
613134-61	NFES 21S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-62	NFES 22 1st Draw	02/08/2019 5:02 am	CR	ICP	Lead	0.5 ug/L	1.8 ug/L	
613134-63	NFES 24S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-64	NFES 25S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-65	NFES 26S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-66	NFES 27S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-67	NFES 28S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-68	NFES 29S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-69	NFES 31 1st Draw	02/08/2019 5:02 am	CR	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-70	NFES 32S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-71	NFES 33S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-72	NFES 34S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-73	NFES 35S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-74	NFES 36 1st Draw	02/08/2019 5:02 am	OT.5	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-75	NFES 37S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-76	NFES 38 1st Draw	02/08/2019 5:02 am	CR	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-77	NFES 39S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-78	NFES 40S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-79	NFES 41S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-80	NFES 42S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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613134-81	NFES 43 1st Draw	02/08/2019 5:02 am	CR	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-82	NFES 44S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-83	NFES 45S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-84	NFES 46S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-85	NFES 47 1st Draw	02/08/2019 5:02 am	CR	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-86	NFES 48 1st Draw	02/08/2019 5:02 am	CR	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-87	NFES 49S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-88	NFES 50S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-89	NFES 51S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-90	NFES 52S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-91	NFES 53S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	0.73 ug/L	
613134-92	NFES 54S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	0.67 ug/L	
613134-93	NFES 55S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-94	NFES 56S 1st Draw	02/08/2019 5:02 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-95	NFES 2BW 1st Draw	02/08/2019 5:02 am	OT.1	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-96	NFES 59 1st Draw	02/08/2019 5:02 am	NO	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
613134-97	NFES 60 1st Draw	02/08/2019 5:02 am	OT.2	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

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.