



CERTIFICATE OF ANALYSIS

Chain of Custody: 612730
Client: Howard County Public School System
Address: 10910 Route 108
Ellicott City, MD 21042
Attention: Jeff Klenk

Job Name: Deep Run Elementary School
Job Location: 6925 Old Waterloo Road, Elkridge, MD
21075
Job Number: 13.042
P.O. Number: Not Provided

Date Submitted: 01/25/2019
Date Analyzed: 01/30/2019
Report Date: 01/31/2019
Date Sampled: 01/24/2019 - 01/25/2019
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					
612730-1	DRES 2F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-2	DRES 3F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-3	DRES 4F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-4	DRES 5F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-5	DRES 6F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-6	DRES 7F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-7	DRES 9F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-8	DRES 10F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-9	DRES 11F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-10	DRES 12F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-11	DRES 13F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-12	DRES 14F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-13	DRES 15F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-14	DRES 16F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-15	DRES 17F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-16	DRES 18F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-17	DRES 19 1st Draw	01/24/2019 5:11 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-18	DRES 20 1st Draw	01/24/2019 5:11 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-19	DRES 21F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-20	DRES 22F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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612730-21	DRES 23F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-22	DRES 24F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-23	DRES 25F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-24	DRES 26F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-25	DRES 27F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-26	DRES 28F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-27	DRES 29F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-28	DRES 30F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-29	DRES 32F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-30	DRES 33F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-31	DRES 34F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-32	DRES 35F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	0.95 ug/L	
612730-33	DRES 36F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-34	DRES 37F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-35	DRES 38F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-36	DRES 39F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-37	DRES 40F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-38	DRES 41F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-39	DRES 42F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-40	DRES 43F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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612730-41	DRES 44F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-42	DRES 45F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-43	DRES 46F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-44	DRES 47F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-45	DRES 48F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-46	DRES 49F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-47	DRES 51 1st Draw	01/24/2019 5:11 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-48	DRES 52 1st Draw	01/24/2019 5:11 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-49	DRES 54F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-50	DRES 55F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-51	DRES 56F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-52	DRES 57F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-53	DRES 58F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-54	DRES 59F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-55	DRES 60F 1st Draw	01/24/2019 5:11 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-56	DRES 1 1st Draw	01/25/2019 5:07 am	KS	ICP	Lead	0.5 ug/L	0.52 ug/L	
612730-57	DRES 2S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-58	DRES 3S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-59	DRES 4S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-60	DRES 5S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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612730-61	DRES 6S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-62	DRES 7S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-63	DRES 8 1st Draw	01/25/2019 5:07 am	TL	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-64	DRES 9S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	0.68 ug/L	
612730-65	DRES 10S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-66	DRES 11S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-67	DRES 12S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-68	DRES 13S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-69	DRES 14S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-70	DRES 15S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	0.83 ug/L	
612730-71	DRES 16S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-72	DRES 17S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-73	DRES 18S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-74	DRES 21S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-75	DRES 22S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-76	DRES 23S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-77	DRES 24S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-78	DRES 25S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-79	DRES 26S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-80	DRES 27S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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		Date/Time	Location					
612730-81	DRES 28S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-82	DRES 29S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-83	DRES 30S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-84	DRES 31 1st Draw	01/25/2019 5:07 am	OT.7	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-85	DRES 32S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	1 ug/L	
612730-86	DRES 33S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-87	DRES 34S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-88	DRES 35S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	0.7 ug/L	
612730-89	DRES 36S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-90	DRES 37S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-91	DRES 38S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-92	DRES 39S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-93	DRES 40S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-94	DRES 41S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-95	DRES 42S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-96	DRES 43S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-97	DRES 44S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-98	DRES 45S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-99	DRES 46S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-100	DRES 47S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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612730-101	DRES 48S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-102	DRES 49S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-103	DRES 50 1st Draw	01/25/2019 5:07 am	NO	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-104	DRES 53 1st Draw	01/25/2019 5:07 am	OT.2	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-105	DRES 54S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-106	DRES 55S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-107	DRES 56S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-108	DRES 57S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-109	DRES 58S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-110	DRES 59S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-111	DRES 60S 1st Draw	01/25/2019 5:07 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
612730-112	DRES 61 1st Draw	01/25/2019 5:07 am	NO	ICP	Lead	0.5 ug/L	0.97 ug/L	
612730-113	DRES 62 1st Draw	01/25/2019 5:07 am	OT.office	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.