



CERTIFICATE OF ANALYSIS

Chain of Custody: 610750
Client: Howard County Public School System
Address: 10910 Route 108
Ellicott City, MD 21042
Attention: Jeff Klenk

Job Name: Pointers Run Elementary
Job Location: 6600 S Trotter Road, Clarksville, MD
21029
Job Number: 13.044
P.O. Number: Not Provided

Date Submitted: 10/12/2018
Date Analyzed: 10/19/2018
Report Date: 10/19/2018
Date Sampled: 10/09/2018 - 10/16/2018
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					
610750-1	PRES 5F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	2.3 ug/L	
610750-2	PRES 9F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	2.8 ug/L	
610750-3	PRES 10F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	16 ug/L	15.8 ug/L.
610750-4	PRES 11F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	2.7 ug/L	
610750-5	PRES 15F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	1.7 ug/L	
610750-6	PRES 18F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	1.8 ug/L	
610750-7	PRES 22F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	2.1 ug/L	
610750-8	PRES 23F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	71 ug/L	71.0 ug/L. This sample has an elevated level of lead (above 20.5 ppb).
610750-9	PRES 36F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	3.1 ug/L	
610750-10	PRES 42F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	6.2 ug/L	
610750-11	PRES 45F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	18 ug/L	17.7 ug/L.
610750-12	PRES 46F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	9.5 ug/L	
610750-13	PRES 47F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	1.7 ug/L	
610750-14	PRES 51F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	3 ug/L	
610750-15	PRES 53F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	8.4 ug/L	
610750-16	PRES 54F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	2 ug/L	
610750-17	PRES 55F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	0.97 ug/L	
610750-18	PRES 56F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	1.4 ug/L	
610750-19	PRES 59F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	0.68 ug/L	
610750-20	PRES 60F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	4.5 ug/L	



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610750-21	PRES 61F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-22	PRES 62F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	0.52 ug/L	
610750-23	PRES 63F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-24	PRES 64F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	0.81 ug/L	
610750-25	PRES 65F 1st Draw	10/09/2018 5:05 am	CC/B	ICP	Lead	0.5 ug/L	0.73 ug/L	
610750-26	PRES 16 1st Draw	10/09/2018 5:05 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-27	PRES 17 1st Draw	10/09/2018 5:05 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-28	PRES 2 1st Draw	10/09/2018 5:05 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-29	PRES 29 1st Draw	10/09/2018 5:05 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-30	PRES 3 1st Draw	10/09/2018 5:05 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-31	PRES 30 1st Draw	10/09/2018 5:05 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-32	PRES 37 1st Draw	10/09/2018 5:05 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-33	PRES 4 1st Draw	10/09/2018 5:05 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-34	PRES 44 1st Draw	10/09/2018 5:05 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-35	PRES 52 1st Draw	10/09/2018 5:05 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-36	PRES 48F 1st Draw	10/09/2018 5:05 am	DF/C	ICP	Lead	0.5 ug/L	0.9 ug/L	
610750-37	PRES 1 1st Draw	10/10/2018 5:05 am	KS	ICP	Lead	0.5 ug/L	1.7 ug/L	
610750-38	PRES 69 1st Draw	10/10/2018 5:05 am	DF/C	ICP	Lead	0.5 ug/L	0.54 ug/L	
610750-39	PRES 70 1st Draw	10/10/2018 5:05 am	OT.4	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-40	PRES 71 1st Draw	10/10/2018 5:05 am	OT.4	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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		Date/Time	Location					
610750-41	PRES 5S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	2.1 ug/L	
610750-42	PRES 6 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	4 ug/L	
610750-43	PRES 7 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-44	PRES 8 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	1 ug/L	
610750-45	PRES 9S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	1.1 ug/L	
610750-46	PRES 10S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	16 ug/L	15.9 ug/L.
610750-47	PRES 11S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	2.6 ug/L	
610750-48	PRES 12 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	2.1 ug/L	
610750-49	PRES 13 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	1.2 ug/L	
610750-50	PRES 14 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	2.2 ug/L	
610750-51	PRES 15S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	1.6 ug/L	
610750-52	PRES 18S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	1.9 ug/L	
610750-53	PRES 19 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	1.4 ug/L	
610750-54	PRES 20 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	6.9 ug/L	
610750-55	PRES 21 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	1.9 ug/L	
610750-56	PRES 22S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	1.6 ug/L	
610750-57	PRES 23S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	7.9 ug/L	
610750-58	PRES 24 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	4 ug/L	
610750-59	PRES 25 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	0.76 ug/L	
610750-60	PRES 26 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	< 0.5 ug/L	



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610750-61	PRES 27 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	0.73 ug/L	
610750-62	PRES 28 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	0.67 ug/L	
610750-63	PRES 31 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	0.64 ug/L	
610750-64	PRES 32 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	0.65 ug/L	
610750-65	PRES 33 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	0.65 ug/L	
610750-66	PRES 34 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	0.66 ug/L	
610750-67	PRES 35 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	3 ug/L	
610750-68	PRES 36S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	2 ug/L	
610750-69	PRES 38 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	1.2 ug/L	
610750-70	PRES 39 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	1.5 ug/L	
610750-71	PRES 40 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	1.3 ug/L	
610750-72	PRES 41 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	9.1 ug/L	
610750-73	PRES 42S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	0.71 ug/L	
610750-74	PRES 43 1st Draw	10/10/2018 5:05 am	OT.4	ICP	Lead	0.5 ug/L	17 ug/L	17.5 ug/L.
610750-75	PRES 45S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	1.7 ug/L	
610750-76	PRES 46S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	6.5 ug/L	
610750-77	PRES 47S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	2.1 ug/L	
610750-78	PRES 48S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	1.2 ug/L	
610750-79	PRES 49 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	0.78 ug/L	
610750-80	PRES 50 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	1.6 ug/L	



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610750-81	PRES 51S 1st Draw	10/10/2018 5:05 am	DF/C	ICP	Lead	0.5 ug/L	1.8 ug/L	
610750-82	PRES 53S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	4.9 ug/L	
610750-83	PRES 54S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	1.9 ug/L	
610750-84	PRES 55S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	0.91 ug/L	
610750-85	PRES 56S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	0.59 ug/L	
610750-86	PRES 57 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	0.57 ug/L	
610750-87	PRES 58 1st Draw	10/10/2018 5:05 am	CR	ICP	Lead	0.5 ug/L	1.6 ug/L	
610750-88	PRES 59S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	0.56 ug/L	
610750-89	PRES 60S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	1.8 ug/L	
610750-90	PRES 61S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	0.81 ug/L	
610750-91	PRES 62S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-92	PRES 63S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-93	PRES 64S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	0.52 ug/L	
610750-94	PRES 65S 1st Draw	10/10/2018 5:05 am	CC/S	ICP	Lead	0.5 ug/L	0.5 ug/L	
610750-95	PRES 66 1st Draw	10/10/2018 5:05 am	NO	ICP	Lead	0.5 ug/L	1.2 ug/L	
610750-96	PRES 67 1st Draw	10/10/2018 5:05 am	OT.4	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-97	PRES 68 1st Draw	10/10/2018 5:05 am	TL	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-98	PRES 37 1st Draw	10/16/2018 6:40 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-99	PRES 44 1st Draw	10/16/2018 6:40 am	DF/C	ICP	Lead	0.5 ug/L	< 0.5 ug/L	
610750-100	PRES 52 1st Draw	10/16/2018 6:40 am	DF/C	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): 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

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. NVLAP accreditation applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AHERA air samples. This report must not be used to claim, and does not imply product certification, approval, or endorsement by NVLAP or any agency of the Federal Government. All rights reserved. AMA Analytical Services, Inc.