LIMITED LEAD AND COPPER IN DRINKING WATER SAMPLING

G. P. Babb Middle School CCPS No. 3050 5500 Reynolds Road Forest Park, GA 30297

GLE Project No.: 18000-18861

Prepared for:

Clayton County Public Schools 1058 Fifth Avenue Jonesboro, Georgia 30236

October 2018

Prepared by:



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1.0 INTRODUCTION

GLE was contracted by Clayton County Public Schools (CCPS), through RFP No. 017-17, to perform water collection and testing services for lead and copper at G. P. Babb Middle School. The purpose of the contracted project was to collect and test water samples taken from CCPS drinking, cooking, and nursing water outlets to identify the presence of lead and copper in the water of CCPS schools and administrative/support buildings. Outlets not used for drinking, such as restroom faucets, maintenance areas, and science labs were excluded from this scope of work. The testing was generally performed in accordance with the Environmental Protection Agency (EPA)'s 3Ts for Reducing Lead in Drinking Water in Schools Technical Guidance Document (revised October 2006).

On October 4, 2018, Ms. Katrina Riley and Ms. Isis Hamilton of GLE Associates, Inc. (GLE), performed initial lead and copper in drinking water sampling of Client-designated drinking water fountains and outlets used for drinking, cooking, and/or nursing located within G. P. Babb Middle School located at 5500 Reynolds Road in Jonesboro, Georgia. According to the Client's representative, G. P. Babb Middle School was originally constructed in 1966, with major renovations or additions in 1967, 1986, 1987, 2000 and 2013. It is our understanding that no previous water testing has been conducted at G. P. Babb Middle School.

2.0 INVENTORY AND SAMPLING PLANS

Prior to the initial sampling event, on February 27, 2018, GLE mobilized to the site to inventory the existing outlets at the facility to devise a sampling plan. Further, GLE submitted a Plumbing Profile to CCPS to complete prior to sampling. Based on the results of GLE's inventory and CCPS's plumbing profile, a sampling plan was created and provided to CCPS. A copy of the Sampling Plan with the sample number identifying sample areas is included in **Appendix C**.

3.0 LEAD AND COPPER IN DRINKING WATER SAMPLING PROCEDURES

Prior to the sampling events, a Client-designated representative flushed the drinking, cooking, and nursing water outlets the night before each sampling event (or between at least 8 to 18 hours prior to the sampling event). Refrigerated drinking water fountains were flushed for 15 minutes. Non-refrigerated fountains and faucets used for drinking and cleaning were run for 30 seconds to one minute or until cold. The remaining Client-designated faucets were flushed for 10 minutes. The flushing was performed from the faucet located furthest away from the service line on each wing and/or floor of the building. Once the flushing was complete, CCPS personnel logged the completion date and time on the outlet flushed. GLE confirmed the 8 to 18 hour window prior to taking samples from flushed outlets and submitting them to the laboratory for analysis.

GLE assumed that the water supply lines and outlets in the assessed building were operating properly at the time of sampling. One representative water sample for lead and copper analysis was collected from each outlet identified in the sampling plan utilizing sterile, 250 milliliter (mL) sampling bottles preserved with nitric acid (HNO₃). The sample was collected immediately after activating the water fountain or outlet, described in this report as "first draw".

The collected samples were submitted to Waypoint Analytical, Inc., a qualified laboratory in Memphis, Tennessee, for analysis. The samples were analyzed for lead and copper in water by Inductively Coupled Plasma/Mass Spectroscopy (ICP/MS) in general accordance with EPA Method 200.8. A summary of the sampling locations and the associated analytical results are summarized below and in the attached table. The laboratory reports and chain of custodies are located in **Appendix A**. A copy of the laboratory's certification is included in **Appendix B**.

4.0 LEAD AND COPPER IN DRINKING WATER SAMPLING FINDINGS

A total of 37 water samples were collected for analysis of lead and copper content, comprised of one, water sample (first draw) from each Client-designated water fountain or outlet at the above-referenced school. The sample ID consisted of "W" for water, sample number, followed by A for first draw. An ice machine identified within the concession stand near the gym was not flushed/inoperable during the initial sampling event. A summary of the analytical results for the lead and copper in drinking water sampling follows in **Table 4.1 – Summary of Lead and Copper in Drinking Water Sampling Results.** The reporting limit for the lead sample analysis was 0.500 micrograms per liter (μg/L) or parts per billion (ppb) and for copper sample analysis was 0.500 micrograms per liter (μg/L) or parts per billion (ppb).

According to the EPA's 3Ts for Reducing Lead in Drinking Water in Schools Technical Guidance Document (revised October 2006), EPA recommends that water fountains and/or outlets be taken out of service if the lead level exceeds 20 µg/L or ppb and if the copper level exceeds 1,300 µg/L or ppb. Public water supply (PWS) systems are subject to an action level (AL) of 15 µg/L or ppb of lead in water for treatment (specifically, if more than 10% of samples at residences tested exceed 15 ppb, system-wide corrosion control treatment may be necessary). For the purposes of this sampling event CCPS is taking corrective action for samples reported at or greater than 15 µg/L or ppb for lead and 1,300 µg/L or ppb for copper.

TABLE 4.1 SUMMARY OF LEAD AND COPPER IN DRINKING WATER SAMPLING RESULTS G. P. BABB MIDDLE SCHOOL JONESBORO, GEORGIA

SAMPLE NUMBER	TEST LOCATION	FIRST DRAW- LEAD SAMPLE RESULTS (µg/L)	FIRST DRAW- COPPER SAMPLE RESULTS (µg/L)
W1A	GYM DRINKING WATER FOUNTAIN (RIGHT)	BRL	30.5
W2A	GYM DRINKING WATER FOUNTAIN (LEFT)	BRL	33.3
W3A	CONCESSION STAND DRINKING WATER	3.67	27.4
W4A	GYM NEAR GIRLS ATHLETICS DRINKING WATER FOUNTAIN (RIGHT)	BRL	38.9
W5A	GYM NEAR GIRLS ATHLETICS DRINKING WATER (LEFT)	BRL	45.6
W6A	GYM NEAR BOYS ATHLETICS DRINKING WATER (RIGHT)	BRL	34.8
W7A	GYM NEAR BOYS ATHLETICS DRINKING WATER (LEFT)	BRL	48.2
W8A	GYM NEAR BAND ROOM (RIGHT)	1.55	299
W9A	GYM NEAR BAND ROOM (LEFT)	2.03	361
W10A	HALLWAY NEAR ROOM 204 DRINKING WATER FOUNTAIN (RIGHT)	BRL	76.1
W11A	HALLWAY NEAR ROOM 204 DRINKING WATER FOUNTAIN (LEFT)	BRL	90.1
W12A	HALLWAY NEAR ROOM 211 DRINKING WATER FOUNTAIN (RIGHT)	BRL	134
W13A	HALLWAY NEAR ROOM 211 DRINKING WATER FOUNTAIN (LEFT)	BRL	141

TABLE 4.1 SUMMARY OF LEAD AND COPPER IN DRINKING WATER SAMPLING RESULTS G. P. BABB MIDDLE SCHOOL JONESBORO, GEORGIA

SAMPLE NUMBER	TEST LOCATION	FIRST DRAW- LEAD SAMPLE RESULTS (µg/L)	FIRST DRAW- COPPER SAMPLE RESULTS (µg/L)
W14A	HALLWAY NEAR ELECTRICAL ROOM DRINKING WATER FOUNTAIN (RIGHT)	BRL	56.7
W15A	HALLWAY NEAR ELECTRICAL ROOM DRINKING WATER FOUNTAIN (LEFT)	BRL	94.0
W16A	HALLWAY NEAR ROOM 415 DRINKING WATER FOUNTAIN (RIGHT)	0.554	105
W17A	HALLWAY NEAR ROOM 415 DRINKING WATER FOUNTAIN (LEFT)	BRL	95.3
W18A	CLASSROOM 410 EAST WALL DRINKING WATER (RIGHT)	1.13	80.0
W19A	CLASSROOM 410 EAST WALL DRINKING WATER (LEFT)	1.74	90.7
W20A	CLASSROOM 410 WEST WALL DRINKING WATER (LEFT)	0.701	78.6
W21A	CLASSROOM 410 WEST WALL DRINKING WATER (LEFT)	1.12	152
W22A	MEDIA CENTER DRINKING WATER	BRL	76.5
W23A	DANCE STUDIO NEAR MECHNICAL ROOM 570.1 DRINKING WATER FOUNTAIN	7.65	184
W24A	HALLWAY NEAR ROOM 604 DRINKING WATER FOUNTAIN (RIGHT)	BRL	80.0
W25A	HALLWAY NEAR ROOM 604 DRINKING WATER FOUNTAIN (LEFT)	BRL	90.6
W26A	HALLWAY NEAR ROOM 612 DRINKING WATER FOUNTAIN (LEFT)	0.644	88.8
W27A	HALLWAY NEAR ROOM 612 DRINKING WATER FOUNTAIN (LEFT)	0.590	89.0

TABLE 4.1 SUMMARY OF LEAD AND COPPER IN DRINKING WATER SAMPLING RESULTS G. P. BABB MIDDLE SCHOOL JONESBORO, GEORGIA

SAMPLE NUMBER	TEST LOCATION	FIRST DRAW- LEAD SAMPLE RESULTS (µg/L)	FIRST DRAW- COPPER SAMPLE RESULTS (µg/L)
W28A	7 TH GRADE HALLWAY NEAR GIRLS BATHROOM DRINKING WATER FOUNTAIN (RIGHT)	BRL	80.1
W29A	7 TH GRADE HALLWAY NEAR GIRLS BATHROOM DRINKING WATER FOUNTAIN (LEFT)	BRL	91.3
W30A	CLASSROOM 711 DRINKING WATER	BRL	141
W31A	CAFETERIA ICE	BRL	1.72
W32A	CAFETERIA DRINKING WATER FOUNTAIN	0.714	240
W33A	KITCHEN NEAR OFFICE DRINKING WATER	BRL	103
W34A	KITCHEN S1 DRINKING WATER (RIGHT)	0.646	71.4
W35A	KITCHEN STEAMER DRINKING WATER	0.588	165
W36A	KITCHEN S2 DRINKING WATER (MIDDLE)	0.520	70.4
W37A	KITCHEN S3 DRINKING WATER (LEFT)	BRL	57.9

BRL – Below Reporting Limits

μg/L – micrograms per liter

Results in **bold** indicate levels at or above the EPA PWS Action Level of 15 μ g/L for Lead in Drinking Water *Properly flushed and resampled during the follow-up testing event.

5.0 CONCLUSIONS ANDS RECOMMENDATIONS

Based on the findings of the lead in drinking water sampling, GLE offers the following conclusions:

- A total of 37 initial first draw water samples were collected for analysis of lead and copper content, comprised of one water sample from each Clientdesignated drinking water fountains and outlets used for drinking, cooking, and/or nursing outlets at G. P. Babb Middle School. During the initial assessment, 37 first draw water samples were submitted to the laboratory for analysis.
- 2. Fifteen (15) of the 37 initial first draw water samples analyzed for lead indicated detectable levels of lead. None of the 37 initial first draw water samples with detectable levels of lead were **greater** than the EPA PWS AL of 15μg/L. An ice machine identified within the concession stand near the gym was not flushed/inoperable during the initial sampling event. If determined to be used for drinking, cooking, and/or nursing, these outlets will need to be sampled.
- 3. 37 of the 37 first draw initial water samples indicated detectable levels of copper. None of the 37 initial first draw water samples with detectable levels of copper was **greater** than 1300µg/L.

6.0 LIMITATIONS

The results of this assessment apply only to those specific Client-designated water outlets sampled. Per the EPA sampling guidelines, large variations in lead concentrations may be found among individual outlets in a facility because of difference in flow rates and/or building materials; therefore, this assessment is limited to the conditions encountered at the date and time of each sampling event.

APPENDIX A Laboratory Analytical Results and Chains of Custody



10/9/2018

GLE Associates Mr. Matthew Howe 1100 Spring St, NW2Suite 820 Suite 820 Atlanta, GA, 30309

Ref: **Analytical Testing**

Lab Report Number: 18-278-0229

Client Project Description: CCPS: Babb Middle School

Forest Park, GA Project# 18000-18861

Dear Mr. Matthew Howe:

Waypoint Analytical, LLC. received sample(s) on 10/5/2018 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters (NELAP and non-NELAP) were performed in accordance with guidelines established by the USEPA (including 40 CFR 136 Method Update Rule May 2012) and NELAC unless otherwise indicated. Any parameter for which the laboratory is not officially NELAP accredited is indicated by a '~' symbol. These are not included in the scope because NELAP accreditation is either not available or has not been applied for. Additional certifications may be held/are available for parameters, where NELAP accreditation is not required or applicable. A full list of certifications is available upon request.

Certain parameters (chlorine, pH, dissolved oxygen, sulfite...) are required to be analyzed within 15 minutes of sampling. Usually, but not always, any field parameter analyzed at the laboratory is outside of this holding time. Refer to sample analysis time for confirmation of holding time compliance.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an asreceived basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,

Andrea R Brownfield Project manager

Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.

Mississippi Kentucky #90047

Alabama #40750 Louisiana California Tennessee #TN02027

ndrew Broughell

#04015 #2904

VA NFI AP #460181 #415 EPA #TN00012

#T104704180-11-6 Texas Oklahoma #9311 Kentucky UST #41

Arkansas #88-0650 Virginia #00106





Sample Summary Table

Report Number: 18-278-0229

Client Project Description: CCPS: Babb Middle School

Forest Park, GA Project# 18000-18861

Lab No	Client Sample ID	Matrix	Date Collected	Date Received
97372	W1-A	Aqueous	10/04/2018 03:17	10/05/2018
97373	W2-A	Aqueous	10/04/2018 03:17	10/05/2018
97374	W3-A	Aqueous	10/04/2018 03:18	10/05/2018
97375	W4-A	Aqueous	10/04/2018 03:21	10/05/2018
97376	W5-A	Aqueous	10/04/2018 03:23	10/05/2018
97377	W6-A	Aqueous	10/04/2018 03:24	10/05/2018
97378	W7-A	Aqueous	10/04/2018 03:25	10/05/2018
97379	W8-A	Aqueous	10/04/2018 03:26	10/05/2018
97380	W9-A	Aqueous	10/04/2018 03:26	10/05/2018
97381	W10-A	Aqueous	10/04/2018 03:31	10/05/2018
97382	W11-A	Aqueous	10/04/2018 03:32	10/05/2018
97383	W12-A	Aqueous	10/04/2018 03:36	10/05/2018
97384	W13-A	Aqueous	10/04/2018 03:37	10/05/2018
97385	W14-A	Aqueous	10/04/2018 03:42	10/05/2018
97386	W15-A	Aqueous	10/04/2018 03:43	10/05/2018
97387	W16-A	Aqueous	10/04/2018 03:45	10/05/2018
97388	W17-A	Aqueous	10/04/2018 03:45	10/05/2018
97389	W18-A	Aqueous	10/04/2018 03:48	10/05/2018
97390	W19-A	Aqueous	10/04/2018 03:49	10/05/2018
97391	W20-A	Aqueous	10/04/2018 03:50	10/05/2018
97392	W21-A	Aqueous	10/04/2018 03:51	10/05/2018
97393	W22-A	Aqueous	10/04/2018 03:56	10/05/2018
97394	W23-A	Aqueous	10/04/2018 03:59	10/05/2018
97395	W24-A	Aqueous	10/04/2018 04:01	10/05/2018
97396	W25-A	Aqueous	10/04/2018 04:02	10/05/2018
97397	W26-A	Aqueous	10/04/2018 04:03	10/05/2018



Sample Summary Table

Report Number: 18-278-0229

W37-A

97408

Client Project Description: CCPS: Babb Middle School

Forest Park, GA Project# 18000-18861

Aqueous

Lab No **Client Sample ID** Matrix **Date Collected Date Received** W27-A 97398 10/05/2018 10/04/2018 04:04 Aqueous 97399 W28-A Aqueous 10/04/2018 04:06 10/05/2018 W29-A 97400 Aqueous 10/04/2018 04:07 10/05/2018 W30-A 97401 Aqueous 10/04/2018 04:09 10/05/2018 97402 W31-A Aqueous 10/04/2018 04:15 10/05/2018 W32-A 97403 Aqueous 10/04/2018 04:15 10/05/2018 W33-A 97404 Aqueous 10/04/2018 04:19 10/05/2018 W34-A 97405 Aqueous 10/04/2018 04:20 10/05/2018 W35-A 97406 Aqueous 10/04/2018 04:21 10/05/2018 97407 W36-A Aqueous 10/04/2018 04:22 10/05/2018

10/04/2018 04:23

10/05/2018



Summary of Detected Analytes

Project: CCPS: Babb Middle School

Client Sample ID	Lab Sample ID			_		
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifier
W1-A	L 97372					
EPA-200.8	Copper	30.5	μg/L	0.500	10/08/2018 18:20	
EPA-200.8	Copper	30.5	μg/L	0.500	10/08/2018 18:20	
W2-A	L 97373					
EPA-200.8	Copper	33.3	μg/L	0.500	10/08/2018 18:21	
EPA-200.8	Copper	33.3	μg/L	0.500	10/08/2018 18:21	
W3-A	L 97374					
EPA-200.8	Copper	27.4	μg/L	0.500	10/08/2018 18:26	
EPA-200.8	Lead	3.67	μg/L	0.500	10/08/2018 18:26	
EPA-200.8	Copper	27.4	μg/L	0.500	10/08/2018 18:26	
EPA-200.8	Lead	3.67	μg/L	0.500	10/08/2018 18:26	
W4-A	L 97375					
EPA-200.8	Copper	38.9	μg/L	0.500	10/08/2018 18:28	
EPA-200.8	Copper	38.9	μg/L	0.500	10/08/2018 18:28	
W5-A	L 97376					
EPA-200.8	Copper	45.6	μg/L	0.500	10/08/2018 18:29	
EPA-200.8	Copper	45.6	μg/L	0.500	10/08/2018 18:29	
W6-A	L 97377					
EPA-200.8	Copper	34.8	μg/L	0.500	10/08/2018 18:30	
EPA-200.8	Copper	34.8	μg/L	0.500	10/08/2018 18:30	
W7-A	L 97378					
EPA-200.8	Copper	48.2	μg/L	0.500	10/08/2018 18:32	
EPA-200.8	Copper	48.2	μg/L	0.500	10/08/2018 18:32	
W8-A	L 97379					
EPA-200.8	Copper	299	μg/L	0.500	10/08/2018 18:33	
EPA-200.8	Lead	1.55	μg/L	0.500	10/08/2018 18:33	
EPA-200.8	Copper	299	μg/L	0.500	10/08/2018 18:33	
EPA-200.8	Lead	1.55	μg/L	0.500	10/08/2018 18:33	
W9-A	L 97380					
EPA-200.8	Copper	361	μg/L	0.500	10/08/2018 18:36	
EPA-200.8	Lead	2.03	μg/L	0.500	10/08/2018 18:36	
EPA-200.8	Copper	361	μg/L	0.500	10/08/2018 18:36	
EPA-200.8	Lead	2.03	μg/L	0.500	10/08/2018 18:36	
W10-A	L 97381					
EPA-200.8	Copper	76.1	μg/L	0.500	10/08/2018 18:39	



Summary of Detected Analytes

Project: CCPS: Babb Middle School

Client Sample ID	Lab Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifier
W10-A	L 97381					
EPA-200.8	Copper	76.1	μg/L	0.500	10/08/2018 18:39	
W11-A	L 97382					
EPA-200.8	Copper	90.1	μg/L	0.500	10/08/2018 18:52	
EPA-200.8	Copper	90.1	μg/L	0.500	10/08/2018 18:52	
W12-A	L 97383					
EPA-200.8	Copper	134	μg/L	0.500	10/08/2018 18:54	
EPA-200.8	Copper	134	μg/L	0.500	10/08/2018 18:54	
W13-A	L 97384					
EPA-200.8	Copper	141	μg/L	0.500	10/08/2018 18:55	
EPA-200.8	Copper	141	μg/L	0.500	10/08/2018 18:55	
W14-A	L 97385					
EPA-200.8	Copper	56.7	μg/L	0.500	10/08/2018 18:56	
EPA-200.8	Copper	56.7	μg/L	0.500	10/08/2018 18:56	
W15-A	L 97386	56. 7	r-3/ -	0.000	20,00,2020 20.00	
EPA-200.8	Copper	94.0	μg/L	0.500	10/08/2018 18:58	
EPA-200.8	Copper	94.0	μg/L μg/L	0.500	10/08/2018 18:58	
W16-A		31.0	μg/ L	0.500	10,00,2010 10.30	
	L 97387	105	. //	0.500	10/00/2010 10 50	
EPA-200.8	Copper	105	μg/L	0.500	10/08/2018 18:59	
EPA-200.8 EPA-200.8	Lead	0.554 105	μg/L μg/L	0.500 0.500	10/08/2018 18:59 10/08/2018 18:59	
EPA-200.8	Copper Lead	0.554	μg/L μg/L	0.500	10/08/2018 18:59	
		0.551	μ9/ Ε	0.500	10,00,2010 10.35	
N17-A	L 97388	25.2	,,	0.500	10/00/2010 10 01	
EPA-200.8	Copper	95.3	μg/L	0.500	10/08/2018 19:04	
EPA-200.8	Copper	95.3	μg/L	0.500	10/08/2018 19:04	
W18-A	L 97389					
EPA-200.8	Copper	80.0	μg/L	0.500	10/08/2018 19:06	
EPA-200.8	Lead	1.13	μg/L	0.500	10/08/2018 19:06	
EPA-200.8	Copper	80.0	μg/L	0.500	10/08/2018 19:06	
EPA-200.8	Lead	1.13	μg/L	0.500	10/08/2018 19:06	
W19-A	L 97390					
EPA-200.8	Copper	90.7	μg/L	0.500	10/08/2018 19:07	
EPA-200.8	Lead	1.74	μg/L	0.500	10/08/2018 19:07	
EPA-200.8	Copper	90.7	μg/L	0.500	10/08/2018 19:07	



Summary of Detected Analytes

Project: CCPS: Babb Middle School

Client Sample ID	Lab Sample ID			B		
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifier
W19-A	L 97390					
EPA-200.8	Lead	1.74	μg/L	0.500	10/08/2018 19:07	
W20-A	L 97391					
EPA-200.8	Copper	78.6	μg/L	0.500	10/08/2018 19:08	
EPA-200.8	Lead	0.701	μg/L	0.500	10/08/2018 19:08	
EPA-200.8	Copper	78.6	μg/L	0.500	10/08/2018 19:08	
EPA-200.8	Lead	0.701	μg/L	0.500	10/08/2018 19:08	
W21-A	L 97392					
EPA-200.8	Copper	152	μg/L	0.500	10/08/2018 19:10	
EPA-200.8	Lead	1.12	μg/L	0.500	10/08/2018 19:10	
EPA-200.8	Copper	152	μg/L	0.500	10/08/2018 19:10	
EPA-200.8	Lead	1.12	μg/L	0.500	10/08/2018 19:10	
W22-A	L 97393					
EPA-200.8	Copper	76.5	μg/L	0.500	10/08/2018 19:11	
EPA-200.8	Copper	76.5	μg/L	0.500	10/08/2018 19:11	
W23-A	L 97394					
EPA-200.8	Copper	184	μg/L	0.500	10/08/2018 19:13	
EPA-200.8	Lead	7.65	μg/L	0.500	10/08/2018 19:13	
EPA-200.8	Copper	184	μg/L	0.500	10/08/2018 19:13	
EPA-200.8	Lead	7.65	μg/L	0.500	10/08/2018 19:13	
N24-A	L 97395					
EPA-200.8	Copper	80.0	μg/L	0.500	10/08/2018 19:14	
EPA-200.8	Copper	80.0	μg/L	0.500	10/08/2018 19:14	
W25-A	L 97396		. 5.			
EPA-200.8	Copper	90.6	μg/L	0.500	10/08/2018 19:15	
EPA-200.8	Copper	90.6	μg/L μg/L	0.500	10/08/2018 19:15	
		50.0	⊬9/ ∟	0.500	10,00,2010 15.15	
N26-A	L 97397		,.		10/00/22:2	
EPA-200.8	Copper	88.8	μg/L	0.500	10/08/2018 19:17	
EPA-200.8	Lead	0.644	μg/L	0.500	10/08/2018 19:17	
EPA-200.8	Copper	88.8	μg/L	0.500	10/08/2018 19:17	
EPA-200.8	Lead	0.644	μg/L	0.500	10/08/2018 19:17	
W27-A	L 97398					
EPA-200.8	Copper	89.0	μg/L	0.500	10/08/2018 19:22	
EPA-200.8	Lead	0.590	μg/L	0.500	10/08/2018 19:22	
EPA-200.8	Copper	89.0	μg/L	0.500	10/08/2018 19:22	



Summary of Detected Analytes

Project: CCPS: Babb Middle School

Client Sample ID	Lab Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifier
W27-A	L 97398					
EPA-200.8	Lead	0.590	μg/L	0.500	10/08/2018 19:22	
W28-A	L 97399					
EPA-200.8	Copper	80.1	μg/L	0.500	10/08/2018 19:23	
EPA-200.8	Copper	80.1	μg/L	0.500	10/08/2018 19:23	
W29-A	L 97400					
EPA-200.8	Copper	91.3	μg/L	0.500	10/08/2018 19:25	
EPA-200.8	Copper	91.3	μg/L	0.500	10/08/2018 19:25	
W30-A	L 97401					
EPA-200.8	Copper	141	μg/L	0.500	10/08/2018 19:26	
EPA-200.8	Copper	141	μg/L	0.500	10/08/2018 19:26	
W31-A	L 97402					
EPA-200.8	Copper	1.72	μg/L	0.500	10/08/2018 19:39	
EPA-200.8	Copper	1.72	μg/L	0.500	10/08/2018 19:39	
W32-A	L 97403					
EPA-200.8	Copper	240	μg/L	0.500	10/08/2018 19:41	
EPA-200.8	Lead	0.714	μg/L	0.500	10/08/2018 19:41	
EPA-200.8	Copper	240	μg/L	0.500	10/08/2018 19:41	
EPA-200.8	Lead	0.714	μg/L	0.500	10/08/2018 19:41	
W33-A	L 97404					
EPA-200.8	Copper	103	μg/L	0.500	10/08/2018 19:42	
EPA-200.8	Copper	103	μg/L	0.500	10/08/2018 19:42	
W34-A	L 97405					
EPA-200.8	Copper	71.4	μg/L	0.500	10/08/2018 19:43	
EPA-200.8	Lead	0.646	μg/L	0.500	10/08/2018 19:43	
EPA-200.8	Copper	71.4	μg/L	0.500	10/08/2018 19:43	
EPA-200.8	Lead	0.646	μg/L	0.500	10/08/2018 19:43	
W35-A	L 97406					
EPA-200.8	Copper	165	μg/L	0.500	10/08/2018 19:45	
EPA-200.8	Lead	0.588	μg/L	0.500	10/08/2018 19:45	
EPA-200.8	Copper	165	μg/L	0.500	10/08/2018 19:45	
EPA-200.8	Lead	0.588	μg/L	0.500	10/08/2018 19:45	
W36-A	L 97407					
EPA-200.8	Copper	70.4	μg/L	0.500	10/08/2018 19:46	
EPA-200.8	Lead	0.520	μg/L	0.500	10/08/2018 19:46	



Summary of Detected Analytes

Project: CCPS: Babb Middle School

Client Sample ID	Lab Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
W36-A	L 97407					
EPA-200.8	Copper	70.4	μg/L	0.500	10/08/2018 19:46	
EPA-200.8	Lead	0.520	μg/L	0.500	10/08/2018 19:46	
W37-A	L 97408					
EPA-200.8	Copper	57.9	μg/L	0.500	10/08/2018 19:48	
EPA-200.8	Copper	57.9	μg/L	0.500	10/08/2018 19:48	



Client: GLE Associates **CASE NARRATIVE**

Project: CCPS: Babb Middle School Lab Report Number: 18-278-0229

Date: 10/9/2018

Metals Analyses Method EPA-200.8

Sample 97401 (W30-A)

Analyte: Copper

QC Batch No: L403013/L402660

The matrix spike (MS) and/or the matrix spike duplicate (MSD) was out of the acceptable recovery range due to the analyte concentration being greater than 25 times the method quantitation limit (MQL). A dilution test was



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Project CCPS: Babb Middle School

Information: Forest Park, GA

Project# 18000-18861

Andrea R. Brownfield Project manager

Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97372 Matrix: Aqueous

Sample ID : **W1-A** Sampled: **10/4/2018 3:17**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	30.5	μg/L	0.500	1	10/08/18 18:20	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500	1	10/08/18 18:20	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Project# 18000-18861

Andrea R. Brownfield Project manager

Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97373 Matrix: Aqueous
Sample ID : W2-A Sampled: 10/4/2018 3:17

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	33.3	μg/L	0.500	1	10/08/18 18:21	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500		10/08/18 18:21		EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Project# 18000-18861

Andrea R. Brownfield Project manager

Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97374 Matrix: Aqueous

Sample ID : **W3-A** Sampled: **10/4/2018 3:18**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	27.4	μg/L	0.500	1	10/08/18 18:26	CCR	EPA-200.8
Lead	3.67	μg/L	0.500	1	10/08/18 18:26	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Andrea R. Brownfield Project manager

Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97375 Matrix: Aqueous

Sampled: **10/4/2018 3:21**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	38.9	μg/L	0.500	1	10/08/18 18:28	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500	1	10/08/18 18:28	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97376 Matrix: Aqueous

Sample ID : **W5-A** Sampled: **10/4/2018 3:23**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Commen							
Copper	45.6	μg/L	0.500	1	10/08/18 18:29	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500	1	10/08/18 18:29	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No: 97377 Matrix: Aqueous

Sample ID: W6-A Sampled: 10/4/2018 3:24

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	34.8	μg/L	0.500	1	10/08/18 18:30	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500	1	10/08/18 18:30	CCR	EPA-200.8

Qualifiers/ **Definitions** DF

Dilution Factor

MQL



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Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No: 97378 Matrix: Aqueous

Sample ID: W7-A Sampled: 10/4/2018 3:25

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	48.2	μg/L	0.500	1	10/08/18 18:32	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500	1	10/08/18 18:32	CCR	EPA-200.8

Qualifiers/ **Definitions** DF

Dilution Factor

MQL



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Information: Forest Park, GA

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Report Date: 10/09/2018

Received: 10/5/2018

Report Number : 18-278-0229 REPORT OF ANALYSIS

Lab No : 97379 Matrix: Aqueous
Sample ID : W8-A Sampled: 10/4/2018 3:26

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	299	μg/L	0.500	1	10/08/18 18:33	CCR	EPA-200.8
Lead	1.55	μg/L	0.500	1	10/08/18 18:33	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97380 Matrix: Aqueous
Sample ID : W9-A Sampled: 10/4/2018 3:26

Toet Populte Unite MOI DE Data/Time By Analytical

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
		4					
Copper	361	μg/L	0.500	1	10/08/18 18:36	CCR	EPA-200.8
Lead	2.03	μg/L	0.500	1	10/08/18 18:36	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

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REPORT OF ANALYSIS

Lab No : 97381 Matrix: Aqueous

Sample ID : **W10-A** Sampled: **10/4/2018 3:31**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	76.1	μg/L	0.500	1	10/08/18 18:39	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500	1	10/08/18 18:39	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

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REPORT OF ANALYSIS

Lab No : 97382 Matrix: Aqueous
Sample ID : W11-A Sampled: 10/4/2018 3:32

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	90.1	μg/L	0.500	1	10/08/18 18:52	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500		10/08/18 18:52		EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

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REPORT OF ANALYSIS

Lab No: 97383 Matrix: Aqueous

Sample ID: W12-A Sampled: 10/4/2018 3:36

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	134	μg/L	0.500	1	10/08/18 18:54	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500	1	10/08/18 18:54	CCR	EPA-200.8

Qualifiers/ **Definitions** DF

Dilution Factor

MQL



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Report Date: 10/09/2018

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REPORT OF ANALYSIS Report Number: 18-278-0229

Lab No: 97384 Matrix: Aqueous

Sample ID: W13-A Sampled: 10/4/2018 3:37

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	141	μg/L	0.500	1	10/08/18 18:55	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500	1	10/08/18 18:55	CCR	EPA-200.8

Qualifiers/ **Definitions** DF

Dilution Factor

MQL



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Report Date: 10/09/2018

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REPORT OF ANALYSIS

Lab No : 97385 Matrix: Aqueous

Sample ID : **W14-A** Sampled: **10/4/2018 3:42**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	56.7	μg/L	0.500	1	10/08/18 18:56	CCR	EPA-200.8
Lead	< 0.500	μg/L	0.500	1	10/08/18 18:56	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97386 Matrix: Aqueous

Sample ID: W15-A Sampled: 10/4/2018 3:43

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	94.0	μg/L	0.500	1	10/08/18 18:58	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500	1	10/08/18 18:58	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

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REPORT OF ANALYSIS Report Number: 18-278-0229

Lab No: 97387 Matrix: Aqueous Sample ID: W16-A Sampled: 10/4/2018 3:45

Units MQL DF Test Results Date / Time By Analytical Method Analyzed

Copper μg/L 1 10/08/18 18:59 CCR 105 0.500 EPA-200.8 Lead μg/L 0.554 0.500 1 10/08/18 18:59 CCR EPA-200.8

Qualifiers/ **Definitions** DF

Dilution Factor

MQL



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Project# 18000-18861

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Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97388 Matrix: Aqueous

Sample ID : **W17-A** Sampled: **10/4/2018 3:45**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	95.3	μg/L	0.500	1	10/08/18 19:04	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500	1	10/08/18 19:04	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97389 Matrix: Aqueous

Sample ID : **W18-A** Sampled: **10/4/2018 3:48**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	80.0	μg/L	0.500	1	10/08/18 19:06	CCR	EPA-200.8
Lead	1.13	μg/L	0.500	1	10/08/18 19:06	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97390 Matrix: Aqueous

Sample ID : **W19-A** Sampled: **10/4/2018 3:49**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	90.7	μg/L	0.500	1	10/08/18 19:07	CCR	EPA-200.8
Lead	1.74	μg/L	0.500	1	10/08/18 19:07	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

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REPORT OF ANALYSIS

Lab No : 97391 Matrix: Aqueous

Sample ID : **W20-A** Sampled: **10/4/2018 3:50**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	78.6	μg/L	0.500	1	10/08/18 19:08	CCR	EPA-200.8
Lead	0.701	μg/L	0.500	1	10/08/18 19:08	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97392 Matrix: Aqueous

Sample ID : **W21-A** Sampled: **10/4/2018 3:51**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	152	μg/L	0.500	1	10/08/18 19:10	CCR	EPA-200.8
Lead	1.12	μg/L	0.500	1	10/08/18 19:10	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

Received: 10/5/2018

Report Number : 18-278-0229 REPORT OF ANALYSIS

Lab No : 97393 Matrix: Aqueous

Sample ID : **W22-A** Sampled: **10/4/2018 3:56**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	76.5	μg/L	0.500	1	10/08/18 19:11	CCP	EPA-200.8
Lead		, -					
Leau	<0.500	μg/L	0.500	1	10/08/18 19:11	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Number : 18-278-0229 REPORT OF ANALYSIS

Lab No: 97394 Matrix: Aqueous

Sample ID : **W23-A** Sampled: **10/4/2018 3:59**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	184	μg/L	0.500	1	10/08/18 19:13	CCR	EPA-200.8
Lead	7.65	μg/L	0.500	1	10/08/18 19:13	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

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Report Number: 18-278-0229 REPORT OF ANALYSIS

Lab No : 97395 Matrix: Aqueous
Sample ID : W24-A Sampled: 10/4/2018 4:01

Units MQL DF Test Results Date / Time By Analytical Method Analyzed Copper μg/L 1 10/08/18 19:14 CCR 80.0 0.500 EPA-200.8 Lead μg/L 0.500 1 10/08/18 19:14 CCR < 0.500 EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

Received: 10/5/2018

Report Number: 18-278-0229 REPORT OF ANALYSIS

Lab No : 97396 Matrix: Aqueous
Sample ID : W25-A Sampled: 10/4/2018 4:02

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Conner	00.6	ug/l	0.500	1	10/00/10 10:15	CCD	FDA 200 0
Copper	90.6	μg/L	0.500	1	10/08/18 19:15	CCR	EPA-200.8
Lead	< 0.500	μg/L	0.500	1	10/08/18 19:15	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

Received: 10/5/2018

Report Number: 18-278-0229 REPORT OF ANALYSIS

Lab No : 97397 Matrix: Aqueous
Sample ID : W26-A Sampled: 10/4/2018 4:03

Test Results Units MQL DF Date / Time By Analytical Analyzed Method

Copper **88.8** μg/L 0.500 1 10/08/18 19:17 CCR EPA-200.8 Lead **0.644** μg/L 0.500 1 10/08/18 19:17 CCR EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No: 97398 Matrix: Aqueous Sample ID: W27-A Sampled: 10/4/2018 4:04

Units MQL DF Test Results Date / Time By Analytical Method Analyzed Copper μg/L 1 10/08/18 19:22 CCR 89.0 0.500 EPA-200.8 Lead μg/L 0.590 0.500 1 10/08/18 19:22 CCR EPA-200.8

Qualifiers/ **Definitions** DF

Dilution Factor

MQL



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Suite 820

Atlanta, GA 30309

Project CCPS: Babb Middle School

Information: Forest Park, GA

Project# 18000-18861

Andrea R. Brownfield Project manager

Report Date: 10/09/2018

Received: 10/5/2018

Report Number : 18-278-0229 REPORT OF ANALYSIS

Lab No: 97399 Matrix: Aqueous

Sample ID : **W28-A** Sampled: **10/4/2018 4:06**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
		4					
Copper	80.1	μg/L	0.500	1	10/08/18 19:23	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500	1	10/08/18 19:23	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



23169

GLE Associates Mr. Matthew Howe 1100 Spring St, NW²Suite 820

Report Number: 18-278-0229

Suite 820

Atlanta, GA 30309

Project CCPS: Babb Middle School

Information: Forest Park, GA

Project# 18000-18861

Andrea R. Brownfield Project manager

Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97400 Matrix: Aqueous
Sample ID : W29-A Sampled: 10/4/2018 4:07

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Conner		ug/l	0.500		10/00/10 10 35	CCD	EDA 200 0
Copper	91.3	μg/L	0.500	1	10/08/18 19:25	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500	1	10/08/18 19:25	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



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Andrea R. Brownfield Project manager

Report Date: 10/09/2018

Received: 10/5/2018

Report Number: 18-278-0229 REPORT OF ANALYSIS

Lab No : 97401 Matrix: Aqueous
Sample ID : W30-A Sampled: 10/4/2018 4:09

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	141	μg/L	0.500	1	10/08/18 19:26	CCP	EPA-200.8
Сорреі	141	μg/ L	0.500	1	10/06/16 19:20	CCR	EPA-200.0
Lead	< 0.500	μg/L	0.500	1	10/08/18 19:26	CCR	EPA-200.8



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Andrea R. Brownfield Project manager

Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No: 97402 Matrix: Aqueous Sample ID: W31-A Sampled: 10/4/2018 4:15

Units MQL DF Test Results Date / Time By Analytical Method Analyzed

Copper μg/L 1 10/08/18 19:39 CCR 1.72 0.500 EPA-200.8 Lead μg/L < 0.500 0.500 1 10/08/18 19:39 CCR EPA-200.8

Qualifiers/ **Definitions** DF

Dilution Factor

MQL



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Project# 18000-18861

Andrea R. Brownfield Project manager

Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97403 Matrix: Aqueous

Sample ID : **W32-A** Sampled: **10/4/2018 4:15**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	240	μg/L	0.500	1	10/08/18 19:41	CCR	EPA-200.8
Lead	0.714	μg/L	0.500	1	10/08/18 19:41	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



23169

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Atlanta, GA 30309

Project CCPS: Babb Middle School

Information: Forest Park, GA

Project# 18000-18861

Andrea R. Brownfield Project manager

Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No: 97404 Matrix: Aqueous

Sample ID: W33-A Sampled: 10/4/2018 4:19

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	103	μg/L	0.500	1	10/08/18 19:42	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500	1	10/08/18 19:42	CCR	EPA-200.8

Qualifiers/ **Definitions** DF

Dilution Factor

MQL



23169

GLE Associates Mr. Matthew Howe 1100 Spring St, NW²Suite 820

Report Number: 18-278-0229

1100 Spring St, NW-Suit

Suite 820

Lead

Atlanta, GA 30309

Project CCPS: Babb Middle School

Information: Forest Park, GA

Project# 18000-18861

Andrea R. Brownfield Project manager

Report Date: 10/09/2018

Received: 10/5/2018

EPA-200.8

REPORT OF ANALYSIS

Lab No : 97405 Matrix: Aqueous
Sample ID : W34-A Sampled: 10/4/2018 4:20

μg/L

0.646

Units MQL DF Test Results Date / Time By Analytical Method Analyzed Copper μg/L 1 10/08/18 19:43 CCR 71.4 0.500 EPA-200.8

0.500

Qualifiers/ Definitions DF

Dilution Factor

MQL

Method Quantitation Limit

1 10/08/18 19:43 CCR



23169

GLE Associates
Mr. Matthew Howe

1100 Spring St, NW2Suite 820

Report Number: 18-278-0229

Suite 820

Atlanta, GA 30309

Project CCPS: Babb Middle School

Information: Forest Park, GA

Project# 18000-18861

Andrea R. Brownfield Project manager

Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97406 Matrix: Aqueous
Sample ID : W35-A Sampled: 10/4/2018 4:21

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	165	μg/L	0.500	1	10/08/18 19:45	CCR	EPA-200.8
Lead	0.588	μg/L	0.500	1	10/08/18 19:45	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



23169

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Report Number: 18-278-0229

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Project CCPS: Babb Middle School

Information: Forest Park, GA

Project# 18000-18861

Andrea R. Brownfield Project manager

Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97407 Matrix: Aqueous

Sample ID : **W36-A** Sampled: **10/4/2018 4:22**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	70.4	μg/L	0.500	1	10/08/18 19:46	CCR	EPA-200.8
Lead	0.520	μg/L	0.500	1	10/08/18 19:46	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



23169

GLE Associates
Mr. Matthew Howe

1100 Spring St, NW2Suite 820

Report Number: 18-278-0229

Suite 820

Atlanta, GA 30309

Project CCPS: Babb Middle School

Information: Forest Park, GA

Project# 18000-18861

Andrea R. Brownfield Project manager

Report Date: 10/09/2018

Received: 10/5/2018

REPORT OF ANALYSIS

Lab No : 97408 Matrix: Aqueous

Sample ID : **W37-A** Sampled: **10/4/2018 4:23**

Test	Results	Units	MQL	DF	Date / Time Analyzed	Ву	Analytical Method
Copper	57.9	μg/L	0.500	1	10/08/18 19:48	CCR	EPA-200.8
Lead	<0.500	μg/L	0.500	1	10/08/18 19:48	CCR	EPA-200.8

Qualifiers/ Definitions DF

Dilution Factor

MQL



Quality Control Data

Client ID: GLE Associates

Project Description: CCPS: Babb Middle School

Report No: 18-278-0229

QC Prep: L402659 QC Prep Batch Method: EPA-200.8 QC Analytical Batch(es): L403013
Analysis Method: EPA-200.8
Analysis Description: Metals Analyses

Lab Reagent Blank LRB-L402659 Matrix: AQU

Associated Lab Samples: 97372, 97373, 97374, 97375, 97376, 97377, 97378, 97379, 97380, 97381

Parameter	Units	Blank Result	MQL	Analyzed
Copper	μg/L	< 0.500	0.500	10/08/18 17:58
Lead	μg/L	< 0.500	0.500	10/08/18 17:58

Laboratory Control Sample LCS-L402659

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits	
Copper	μg/L	50.3	49.2	97.9	85-115	
Lead	μg/L	50.3	49.9	99.3	85-115	

Matrix Spike & Matrix Spike Duplicate L 97381-MS-L402659 L 97381-MSD-L402659

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Copper	μg/L	76.1	50.3	50.3	121	119	89.3	85.3	70-130	1.6	20.0
Lead	μg/L	< 0.503	50.3	50.3	50.1	49.4	99.6	98.3	70-130	1.4	20.0

Date: 10/09/2018 10:12 AM

Page 1 of 3



Quality Control Data

Client ID: GLE Associates

Project Description: CCPS: Babb Middle School

Report No: 18-278-0229

QC Prep: L402660 QC Prep Batch Method: EPA-200.8 QC Analytical Batch(es): L403013
Analysis Method: EPA-200.8
Analysis Description: Metals Analyses

Lab Reagent Blank LRB-L402660 Matrix: AQU

Associated Lab Samples: 97382, 97383, 97384, 97385, 97386, 97387, 97388, 97389, 97390, 97391, 97392, 97393, 97394, 97395, 97396,

97397, 97398, 97399, 97400, 97401

Blank MQL **Analyzed Parameter** Units Result < 0.500 0.500 Copper μg/L 10/08/18 18:50 Lead < 0.500 0.500 10/08/18 18:50 μg/L

Laboratory Control Sample LCS-L402660

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits	
Copper	μg/L	50.3	50.3	100	85-115	
Lead	μg/L	50.3	50.2	99.8	85-115	

Matrix Spike & Matrix Spike Duplicate L 97401-MS-L402660 L 97401-MSD-L402660

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Copper	μg/L	141	50.3	50.3	169	170	55.7*	57.7*	70-130	0.5	20.0
Lead	μg/L	< 0.503	50.3	50.3	49.9	51.0	99.3	101	70-130	2.1	20.0

* QC Fail Date: 10/09/2018 10:12 AM Page 2 of 3

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Quality Control Data

Client ID: GLE Associates

Project Description: CCPS: Babb Middle School

Report No: 18-278-0229

QC Prep: L402696 QC Prep Batch Method: EPA-200.8 QC Analytical Batch(es): L403014

Analysis Method: EPA-200.8

Analysis Description: Metals Analyses

Lab Reagent Blank LRB-L402696 Matrix: AQU

Associated Lab Samples: 97402, 97403, 97404, 97405, 97406, 97407, 97408

Parameter	Units	Blank Result	MQL	Analyzed
Copper	μg/L	< 0.500	0.500	10/08/18 19:33
Lead	μg/L	< 0.500	0.500	10/08/18 19:33

Laboratory Control Sample LCS-L402696

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits	
Copper	μg/L	50.3	49.9	99.3	85-115	
Lead	μg/L	50.3	49.8	99.1	85-115	

Matrix Spike & Matrix Spike Duplicate Q 93509-MS-L402696 Q 93509-MSD-L402696

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Copper	μg/L	4.30	50.3	50.3	51.4	51.9	93.7	94.7	70-130	0.9	20.0
Lead	μg/L	< 0.503	50.3	50.3	48.8	49.5	97.1	98.5	70-130	1.4	20.0

Date: 10/09/2018 10:12 AM

Page 3 of 3



Cooler Receipt Form

Customer Number: 23169

Customer Name: GLE Associates 18-278-0229 Report Number:

Shipping Method

			J		
Fed Ex	US Postal	◯ Lab		Other :	
UPS	Client	O Cour	ier	Thermometer ID:	N/A
Shipping contain	er/cooler uncompron	nised?	Yes	○ No	
Number of coole	rs received		1		
Custody seals in	tact on shipping cont	ainer/cooler?	Yes	○ No	Not Require
Custody seals in	tact on sample bottle	s?	O Yes	○ No	Not Require
Chain of Custody	y (COC) present?		Yes	○ No	
COC agrees with	n sample label(s)?		Yes	○ No	
COC properly co	mpleted		Yes	○ No	
Samples in prop	er containers?		Yes	○ No	
Sample containe	ers intact?		Yes	○ No	
Sufficient sample	e volume for indicated	d test(s)?	Yes	○ No	
All samples rece	ived within holding tir	me?	Yes	○ No	
Cooler temperat	ure in compliance?		Yes	○ No	
	arrived at the laborat onsidered acceptable jun.		Yes	○ No	
Water - Sample	containers properly p	reserved	Yes	○ No	○ N/A
Water - VOA via	ls free of headspace		O Yes	○ No	● N/A
Trip Blanks rece	ived with VOAs		O Yes	○ No	● N/A
Soil VOA method	d 5035 – compliance	criteria met	O Yes	○ No	● N/A
High concent	ration container (48 h	nr)	Lov	w concentration EnC	ore samplers (48 h
High concent	ration pre-weighed (r	nethanol -14	d) Lov	w conc pre-weighed	vials (Sod Bis -14 d
Special precaution	ons or instructions in	cluded?	O Yes	No	
Comments:					

Page 50 of 54

Signature: Sovanchampa Yos

Date & Time: 10/05/2018 10:28:06

APPENDIX B Laboratory Certification



ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Watershed Protection Branch 2 Martin Luther King, Jr. Drive Suite 1152, East Tower Atlanta, Georgia 30334 404-463-1511

Mr. Michael T. Kauffman, Laboratory Director Waypoint Analytical, Inc. 2790 Whitten Road Memphis, TN 38133

WAR 1 3 2018

RE: Certification by Reciprocity Waypoint Analytical, Inc. Georgia ID #C 044

Dear Mr. Kauffman:

The Georgia Department of Natural Resources, Environmental Protection Division (EPD), is in receipt of your laboratory's request to fulfill your laboratory's request for Certification by Reciprocity for the analysis of **Lead and Copper** in Drinking Water by **EPA 200.8** Therefore, in accordance with the Georgia Safe Drinking Water Act of 1977 (Sections12-5-170 through 12-5-193, O.C.G.A.) and the Rules for Safe Drinking Water (Chapter 391-3-5), this certification replaces any previously issued certification and is valid until May 10, 2020. This certificate is contingent upon continued Certification by the State of Tennessee and is non-transferable. This certificate is also contingent upon continued acceptable semi-annual Proficiency Testing results.

Prior to the expiration of this certification, please contact your accrediting/certifying authority and request the following information be forwarded to Lynne Grubb at lynne.grubb@dnr.ga.gov or Sean Earley at lynne.grubb@dnr.ga.gov or Sean Earley at

1. Copies of the most current on-site and accepted corrective actions

2. Copies of the scope of accreditation listing analytes

If you have any questions, please feel free to contact Lynne Grubb at 404-657-3189 or Sean Earley at 404-651-9581.

Thank you.

Sean Earley

Laboratory Certification Officer Drinking Water Compliance Unit Lewis Hays

Program Manager

Watershed Compliance Program

WAYPOINT ANALYTICAL (GA LAB ID# C044) 2790 Whitten Road Memphis, TN 38133 Effective March 1, 2018 to May 10, 2020

ANALYTE	CERTIFIED BY	METHOD
INORGANIC CHEMICALS		
Copper	TN DEC	200.8
Lead	TN DEC	200.8



Dear Client:

Re: Georgia State Law (O.C.G.A. § 12-2-9) requires all commercial laboratories submitting data to the Environmental Protection Division for regulatory purposes be approved or accredited by an accrediting authority such as NELAP. Pursuant to this regulation this laboratory affirms the following certification in support of this regulation under Chapter 391-3-26-05:

Laboratory: Waypoint Analytical, Inc.

2790 Whitten Road Memphis, TN 38133

Accreditor: NELAP Accrediting Authority

Primary Accrediting State: Louisiana Department of Environmental Quality (LELAP)

Accreditation Number: 04015

Scope: CWA/RCRA

Effective: 07/01/2017

Expires: 06/30/2018

Certificate and scope available upon request.

If you have any questions or comments please feel free in contacting me at rmedina@waypointanalytical.com.

Respectfully,

Dr. Richard Medina Chief Quality Officer

APPENDIX C Sampling Plan

