



April 30, 2018

Mr. Ed Buzzelli  
Hanover County Public Schools  
Operations  
200 Berkley Street  
Ashland, VA 23005

Subject: Lead in Drinking Water Sampling Results – Resampling and Additional Sampling Events  
Patrick Henry High School

Dear Ed,

EEE Consulting Inc. (3e) originally sampled nineteen (19) high priority drinking water sources at the Patrick Henry High School located at 12449 W. Patrick Henry Road in Ashland, Virginia on November 7, 2017. High priority drinking water sources tested included the water main entering the building, drinking water fountains/coolers and bubbler drinking fountains. One sample collected from the drinking water sources contained lead concentrations above the Action Limit of 20 parts per billion (ppb) of lead recommended by the EPA Revised Technical Guidance, “3Ts for Reducing Lead in Drinking Water in Schools”. Samples collected from the remaining drinking water sources at Patrick Henry High School contained lead concentrations below the Action Limit. Sample results depicted in red font contained concentrations above the Action Limit of 20 ppb lead.

**Elevated Lead Results - November 7, 2017:**

Sample ID	Location	Lead Result
PHHS-DF-05	Elkay Drinking Fountain in Gym	3,850 ppb

3e recommended this source be resampled with an initial draw sample (denoted as A) followed by a 30-second flush sample (denoted as B) to determine whether lead is being contributed from the outlet or the internal plumbing of the building. This unit was taken out of service until follow-up testing was completed on February 2, 2018.

In addition, one (1) drinking fountain located at the Field House was included in this round of sampling. A neighboring fountain was winterized on the date of the inspection; therefore, it was not sampled. The samples were submitted to Environmental Hazards Services, LLC in Chesterfield, Virginia for analysis of lead content.

**Resample and New Source Results - February 2, 2018:**

Sample ID	Location	Lead Result
PHHS-DF-05A	Elkay Drinking Fountain in Gym	12,000 ppb
PHHS-DF-05B	Elkay Drinking Fountain in Gym	17.4 ppb
PHHS-DF-19	Drinking Fountain at Field House	7.12 ppb

The resample results indicated that lead concentrations from the initial resample of PHHS-DF-05 were above the EPA Action Limit of 20 ppb; however, the resample collected after the 30-second flush was reported below the Action Limit. The new source, PHHS-DF-19, was reported below the Action Limit. 3e determined that the elevated concentration of the first draw sample (PHHS-DF-05A) and acceptable concentration in the second draw sample (PHHS-DF-05B) is likely due to leaching of lead into the water as it sits in the bubbler, but not in the bubbler valves. Documentation for the samples is included on the attached field sampling documentation form and sample location sites are represented on the attached building diagram.

In lieu of lead contamination being localized and limited to one (1) unit, **3e** recommends replacing this source with a new fountain, as it may be the most practical solution. The EPA worked with the plumbing industry and National Sanitation Foundation (NSF) International to develop an industry standard that is designed to minimize the amounts of lead being leached from these products. Hanover County Public Schools should ensure that any replacement fountain be in compliance with NSF Standard 61, Section 9 before purchasing or installing a new endpoint device.

We appreciate this opportunity to provide our environmental consulting services on this project and look forward to continued services. Please feel free to contact me at (804) 442-3330 ext. 225 with any questions.

Sincerely,

A handwritten signature in blue ink that reads "Carroll H. Ellis, III". The signature is written in a cursive style and is positioned above the typed name.

Carroll H. Ellis, III  
Environmental Scientist

Attachments

Sample Recordkeeping Form										School: Patrick Henry High School	
Sample Collector	Sample ID #	Sample Date	Sample Time	Sample Type (1st Draw or Flush)	Outlet Type	Manufacturer/Model	Serial #	Laboratory	Bottle Lot #	Lead Result (ppb)	
1	KM	PHHS-S-01	11/07/17	6:42 AM	Initial	Kitchen Prep Sink		EHS	44081705	1.19	
2	KM	PHHS-DF-01	11/07/17	6:46 AM	Initial	Drinking Fountain		EHS	44081705	<1.00	
3	KM	PHHS-DF-02	11/07/17	6:48 AM	Initial	Drinking Fountain		EHS	44081705	<1.00	
4	KM	PHHS-DF-03	11/07/17	6:50 AM	Initial	Drinking Fountain		EHS	44081705	<1.00	
5	KM	PHHS-DF-04	11/07/17	6:53 AM	Initial	Drinking Fountain	Halsley-Taylor HAC8FSQ-E1	030518001	EHS	44081705	<1.00
6	KM	PHHS-DF-05	11/07/17	6:56 AM	Initial	Drinking Fountain	Elkay	Not labeled	EHS	44081705	3850
7	KM	PHHS-DF-06	11/07/17	7:00 AM	Initial	Drinking Fountain	Elkay	Not labeled	EHS	44081705	<1.00
8	KM	PHHS-DF-07	11/07/17	7:03 AM	Initial	Drinking Fountain	Elkay	Not labeled	EHS	44081705	<1.00
9	KM	PHHS-DF-08	11/07/17	7:05 AM	Initial	Drinking Fountain		EHS	44081705	<1.00	
10	KM	PHHS-DF-09	11/07/17	7:09 AM	Initial	Drinking Fountain		EHS	44081705	3.67	
11	KM	PHHS-DF-10	11/07/17	7:11 AM	Initial	Drinking Fountain		EHS	44081705	10.2	
12	KM	PHHS-DF-11	11/07/17	7:14 AM	Initial	Drinking Fountain	Elkay EZFS8-1F	140521948	EHS	44081705	<1.00
13	KM	PHHS-DF-12	11/07/17	7:18 AM	Initial	Drinking Fountain	Halsley-Taylor HAC8FSCQ-1D	110723840	EHS	44081705	<1.00
14	KM	PHHS-DF-13	11/07/17	7:24 AM	Initial	Drinking Fountain	Elkay ESQA-13-1	870376118	EHS	44081705	<1.00
15	KM	PHHS-DF-14	11/07/17	7:29 AM	Initial	Drinking Fountain	Elkay EBFS-8-1A	920713397	EHS	44081705	<1.00
16	KM	PHHS-DF-15	11/07/17	7:32 AM	Initial	Drinking Fountain	Halsley-Taylor HAC8FBLQ-1D	010436987	EHS	44081705	<1.00
17	KM	PHHS-DF-16	11/07/17	7:31 AM	Initial	Drinking Fountain		EHS	44081705	<1.00	
18	KM	PHHS-DF-17	11/07/17	7:36 AM	Initial	Drinking Fountain		EHS	44081705	6.91	
19	KM	PHHS-DF-18	11/07/17	7:37 AM	Initial	Drinking Fountain	Elkay EHFS8-1J	130318883	EHS	44081705	<1.00
<b>Resamples</b>											
6	CE	PHHS-DF-05A	02/02/18	10:00 AM	Initial	Drinking Fountain	Elkay	Not Labeled	EHS		12,000
6	CE	PHHS-DF-05B	02/02/18	10:01 AM	30 sec	Drinking Fountain	Elkay	Not Labeled	EHS		17.4





Environmental Hazards Services, L.L.C.  
 7469 Whitepine Rd  
 Richmond, VA 23237  
 Telephone: 800.347.4010

## Lead in Drinking Water Analysis Report

Client: EEE Consulting Inc.  
 8525 Bell Creek Rd.  
 Mechanicsville, VA 23116

Report Number: 18-02-00430  
 Received Date: 02/02/2018  
 Reported Date: 02/19/2018  
 Sampled By: Carroll Ellis III  
 Tech Certification #:

Project/Test Address: Patrick Henry High School; Ashland, VA 23005

Client Number:  
 48-5796

# Laboratory Results

Fax Number:  
 804-442-3334

Lab Sample Number	Client Sample ID	Collection Date	Collection Location	Concentration ug/L (ppb)	Analysis Date	Narrative ID
18-02-00430-001	PHHS-DF-05A	02/02/2018	DRINKING FOUNTAIN	12000	02/19/2018	
18-02-00430-002	PHHS-DF-05B	02/02/2018	DRINKING FOUNTAIN	17.4	02/07/2018	
18-02-00430-003	PHHS-DF-19	02/02/2018	DRINKING FOUNTAIN	7.12	02/07/2018	

Method: SM 3113B-2010  
 Analyst: Jennalee Zlotkowski  
 Accreditation #: VA 460172

Reviewed By Authorized Signatory: *Melissa Kanode*

*Missy Kanode*  
 QA/QC Clerk

Sample Results denoted with a "less than" (<) sign contain less than the reporting limit which is 1 ppb.

The EPA Maximum Contaminant Level for Lead in Drinking Water is 15 ppb. The results herein conform to NELAC standards, where applicable, unless otherwise narrated on this report. Results represent the analysis of samples submitted by the client. Sample location, description, field parameter results, etc., were provided by the client. This report cannot be reproduced, except in full, without written approval from Environmental Hazards Services, L.L.C.

LEGEND                      ug/L= micrograms per liter                      ppb = parts per billion



EHS Laboratories™

ENVIRONMENTAL HAZARDS SERVICES, LLC

Water Chain-of-Custody Form

(For Multi-Sample Projects)

Richmond, VA - Phone: (800) 347-4010 FAX: (804) 275-4907

ONLINE CLIENT PORTAL AVAILABLE FOR ANALYSIS RESULTS AT: www.leadlab.com

18-02-00430



Due Date:

03/16/2018

(Friday)

AE

Company Name: EEE Consulting Inc

Account #: 48-5796

Address: 8525 Bell Creek Rd

City/State/Zip: Mechanicsville, VA 23116

Phone: 804-442-3330

Email: csmith@eee-consulting.com

Fax:

Project Name / Collection Address: Patrick Henry High School

City/State: Ashland, VA

Zip: 23005

(Required)

(Required)

Age of Property: Well Tag # (If Applicable):

Collected by: Carroll H. Ellis, III

Certification #:

P.O. #: 17-191

Relinquished by: Carroll H. Ellis III

Signature: Carroll H. Ellis III

Date: / /

No.	Client Sample ID	Collection Location (Ex: Kitchen Sink)	Collection Date	Collection Time	Metals			Field Parameters		LAB USE
					Lead	Copper	Other	Field pH at time of Collection:	Temp. at time of Collection:	
1	PHHS-DF-05A	Drinking Fountain	2/2/18	10:00	✓	✓				
2	PHHS-DF-05B	Drinking Fountain	2/2/18	10:00	✓	✓				
3	PHHS-DF-19	Drinking Fountain	2/2/18	10:10	✓	✓				
4	PHHS-DF-20	Drinking Fountain	2/2/18		✓	✓				
5	PHHS-DF-21	Drinking Fountain	2/2/18		✓	✓				
6			2/2/18		✓	✓				
7			2/2/18		✓	✓				
8			2/2/18		✓	✓				
9			2/2/18		✓	✓				
10			2/2/18		✓	✓				

Received By: *Arnelle*

Date: 2/2/18 Time: 4:05 PM Temp. Received: \_\_\_\_\_

Shipping Tracking #: \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_

PLEASE SEND WATER KIT SAMPLES TO THE FOLLOWING ADDRESS:

556 S. Mansfield St.

Ypsilanti, MI 48197

All Samples Except for Lead /Metals Must Be Shipped On Ice Via Overnight Shipping

NTL Lab ID Number