GLOBAL
Environmental Consultants and Engineers

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June 30, 2021

Eric Derin, MBA, MSA
Director of Operations
Chesapeake Education Services, LLC.
Chesapeake Lighthouse Foundation

RE: Drinking Water Sampling and Testing for Lead – CES/CFL Charter Schools in Maryland

Dear Mr. Derin,

Global, Inc., (GLOBAL) an environmental consulting company in Maryland performed sampling and testing for lead in six Public Charter Schools managed by the Chesapeake Lighthouse Foundation from May 3rd to June 17th, 2021. The specific schools covered are provided below:

- CMIT South Elementary School (9601 Fallard Terrace, Upper Marlboro, MD 20772)
- CMIT South Middle/High School (9822 Fallard Court, Upper Marlboro, MD 20772)
- CMIT North Elementary School (6151 Chevy Chase Dr, Laurel, MD 20707)
- CMIT Academy North Middle School (6100 Frost Place, Laurel, MD 20707)
- CMIT Academy North High School (14800 Sweitzer Lane, Laurel, MD 20707)
- Chesapeake Science Point Charter School (7321 Pkwy Dr S, Hanover, MD 21076)

This report provides a summary of the drinking water sampling and testing methodology, results, conclusions and recommendations.

METHODOLOGY

Drinking water sampling and testing was performed in accordance with the U.S. Environmental Protection Agency (EPA) and Maryland Department of the Environment (MDE) protocols and guidelines. The specific sources sampled included drinking water outlets which are regularly used by school students and/or staff for drinking, food preparation, cooking, or making drinks (e.g. drinking water fountain, bottle fillers, kitchen sink, teachers' lounge sink, classroom sink, nurse's office sink, ice machines, etc.). Water samples were collected by trained and certified water samplers, under the guidance of a Certified Industrial Hygienist. The locations of sampling devices/outlets in each school were indicated in the floor plan/s.

GLOBAL submitted the water samples for lead analysis via EPA Method 200.5 to NAN Technologies, Inc. located in Halethorpe, MD, an American Industrial Hygiene Association-accredited laboratory, certified by the Maryland Department of the Environment to analyze drinking water samples for metals including lead.

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As per Maryland House Bill 1253, enacted June 1, 2019, an elevated concentration of lead in drinking water in public and nonpublic schools is a concentration in excess of 5 parts per billion (ppb). Maryland House Bill 636, approved by the Governor on May 18th, 2021 requires the remediation of outlets that had a lead concentration in excess of 5ppb in drinking water on or before August 1, 2022.

The specific water outlets in each school that were determined to have elevated lead levels in water were immediately shut-off from use until remediation was performed, resampled and tested to verify that the lead levels were below 5ppb.

RESULTS

A summary of the water sources/outlets sampled in each school and the number of outlets with elevated lead in water (>5 ppb) is provided in Table 1 below. None of the water outlets tested in each school had a lead content above 20 ppb.

Table 1: Summary of Drinking Water Sampling and Testing

School	Total Water Outlets Sampled	Total Outlets with Elevated Lead (> 5 ppb)
CMIT South Elementary School	37	27
CMIT South Middle/High School	37	03
CMIT North Elementary School	40	18
CMIT Academy North Middle School	25	10
CMIT Academy North High School	48	8
Chesapeake Science Point Charter School	22	7

REMEDIATION OF WATER OUTLETS WITH ELEVATED LEAD

High efficiency water filters (Aquaspace® and Elkay®) were installed into each outlet with elevated lead in water in accordance with the manufacturer's guidelines. The water outlets were thoroughly cleaned and flushed. The remediated drinking water outlets in each school were resampled and tested, and the lead content in water was determined to be below 5ppb.

CONCLUSIONS

The drinking water sampling performed by GLOBAL in six Public Charter Schools managed by the Chesapeake Lighthouse Foundation enabled to identify specific water outlets with elevated lead. The outlets with elevated lead content were remediated with the installation of high efficiency water filters. Based on the results of initial and post-remediation water testing, all drinking water sources in the six charter schools are in compliance with Maryland regulations.

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RECOMMENDATIONS

- The filters installed for each water outlet with elevated lead need to be replaced at 10-12 month intervals based on the frequency of use.

- Perform regular flushing (e.g., every Monday morning) of drinking water outlets as a best practice for overall water quality. See link below for EPA Instructions on flushing:
    - https://www.epa.gov/sites/production/files/2018-09/documents/flushing_best_practices_factsheet_508.pdf

We appreciate the opportunity to provide drinking water sampling and testing services. If you have any questions regarding this inspection, please contact me on 443-691-0455 (mobile).

Sincerely,

Channa Bambaradeniya, PhD, CIH, CSP, CHMM, PMP
Certified Industrial Hygienist