WHITMAN

Creating Solutions. Exceeding Expectations.

LEAD IN DRINKING WATER SAMPLING

FOR

TOUSSAINT L'OVERTURE - #6
1071 JULIA ST.
ELIZABETH, NJ 07021

ELIZABETH PUBLIC SCHOOLS
500 NORTH BROAD STREET
ELIZABETH, NJ 07208

PROJECT 24-05-58T

PERFORMED BY

WHITMAN

May 13, 2025

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1.0 PROJECT BACKGROUND

There are three ways that lead can contaminate drinking water in school facilities: the water source, the plumbing material, or the actual drinking water outlet fixture. Most sources of drinking water (e.g., ground and surface water) have no lead, or very low levels of lead (i.e., under 5 micrograms per liter [µg/l] or parts per billion [ppb]). Once the drinking water leaves the public water supply system or treatment plant, it comes into contact with piping and plumbing materials that may contain lead. Some lead may get into the water from the distribution system – the network of pipes that carry the water to homes, businesses, and schools in the community. Some communities have lead components in their distribution systems, such as lead joints in cast iron mains, service connections, pigtails, and goosenecks. Even though a public water supplier may deliver water that meets all Federal and State public health standards for lead, there may be lead in the drinking water because of the plumbing in the school facility. Interior plumbing, soldered joints, leaded brass fittings, and various drinking water outlets that contain lead materials are the primary contributors of lead in drinking water. It is also important to note that brass plumbing components contain lead. Since 1986, all plumbing materials must be "lead-free". Although there is an increased probability that a given plumbing component installed prior to 1986 could contain more lead than the newer components, the occurrence of lead in drinking water cannot be predicted solely based on the age of the component or the school facility. The current law allows plumbing materials up to 0.25 percent lead to be labeled as "lead free". However, prior to January 4, 2014, "lead free" allowed up to 8 percent lead content of the wetted surfaces of plumbing products, including those labeled National Sanitation Foundation (NSF) certified. The best way to determine if a school might have elevated levels of lead in its drinking water is by testing the drinking water in that school. Testing facilitates an evaluation of the plumbing materials and helps target appropriate remedial action. It is a key step in understanding the problem, if there is one, and designing an appropriate response.

2.0 SAMPLING/SCREENING METHODOLOGY

2.1 Purpose

Lead in a water sample taken from an outlet can originate from the outlet fixture (e.g. the faucet, bubbler etc.), plumbing upstream of the outlet fixture (e.g. pipe, joints, valves, fittings etc.), or it can already be in the water that is entering the facility. Sample results are then compared to assist in determining the sources of lead contamination and the appropriate corrective measures. Prior to sampling, Whitman ensured that outlets deviating from normal usage were flushed 8-48 hours prior to sampling.

Initial first draw samples are taken from drinking water outlets and food preparation outlets (e.g., bubblers, kitchen faucets) in the facility. These samples determine the lead content of water sitting in water outlets that are used for drinking or cooking within the building(s).

2.2 NJDEP Limits

If initial first draw test results reveal lead concentrations greater than 15 µg/l (ppb) in a 250 mL sample for a given outlet, follow-up flush testing is required to determine if the lead contamination results are from the fixture or from interior plumbing.

3.0 LEAD IN DRINKING WATER SAMPLING RESULTS DISCUSSION

The summary of lead sample results is presented below. The sampling conducted complied with NJDEP protocol, and all samples were submitted to Integrated Analytical Laboratories (NJDEP NELAP #14751) under a completed Chain of Custody Form.

Location	Sample ID #	Date	Time	Lead Result µg/L	NJDEP Lead Limit - µg/L	Corrective Action Taken
Kitchen Left Prep Sink	S1	4/24/2025	5:40 am	1.05	15	
Kitchen Right Prep Sink	S2	4/24/2025	5:41 am	3.78	15	
Room 114 Hallway Water Fountain	S3	4/24/2025	5:44 am	<1.00	15	
Café Water Fountain Next to Mechanical Room	S4	4/24/2025	5:47 am	<1.00	15	
Room 134 Sink	S5	4/24/2025	5:49 am	2.91	15	
Room 134 Hallway Water Fountain	S6	4/24/2025	5:53 am	<1.00	15	
Room 238 Sink	S7	4/24/2025	5:55 am	9.14	15	
Room 238 Hallway Water Fountain	S8	4/24/2025	5:57 am	1.39	15	
Room 240 Sink	S9	4/24/2025	5:59 am	**30.6**	15	**Removed from Service**
Room 242 Sink	S10	4/24/2025	6:02 am	3.50	15	
Nurse's Office Right Sink	S11	4/24/2025	6:05 am	1.84	15	
Nurse's Office Left Sink	S12	4/24/2025	6:06 am	3.95	15	
Room 210 Hallway Water Fountain	S13	4/24/2025	6:08 am	<1.00	15	
Room 216 Hallway Water Fountain	S14	4/24/2025	6:10 am	<1.00	15	
Room 224 Hallway Water Fountain	S15	4/24/2025	6:13 am	2.01	15	
Room 230 Hallway Water Fountain	S16	4/24/2025	6:15 am	<1.00	15	
Room 231 Sink	S17	4/24/2025	6:17 am	**1,250**	15	**Removed from Service**
Room 234 Sink	S18	4/24/2025	6:19 am	4.78	15	
Room 236 Sink	S19	4/24/2025	6:21 am	4.19	15	

Location	Sample ID #	Date	Time	Lead Result µg/L	NJDEP Lead Limit - µg/L	
Room 338 Sink	S20	4/24/2025	6:23 am	6.59	15	
Room 238 Hallway Water Fountain	S21	4/24/2025	6:25 am	<1.00	15	
Roo 340 Sink	S22	4/24/2025	6:27 am	2.82	15	
Room 308 Hallway Water Fountain	S23	4/24/2025	6:30 am	<1.00	15	
Room 317 Teacher's Lounge Sink	S24	4/24/2025	6:34 am	<1.00	15	
Room 316 Hallway Water Fountain	S25	4/24/2025	6:36 am	1.93	15	
Room 324 Hallway Water Fountain	S26	4/24/2025	6:38 am	3.54	15	
Room 330 Hallway Water Fountain	S27	4/24/2025	6:40 am	<1.00	15	
Room 336 Sink	S28	4/24/2025	6:42 am	3.70	15	
1st Floor Staff Lounge	S29	4/24/2025	6:48 am	2.81	15	
Gym Water Fountain Next to Boy's Locker Room	S30	4/24/2025	6:54 am	<1.00	15	
Gym Water Fountain Next to Girl's Locker Room	S31	4/24/2025	6:55 am	<1.00	15	
Room 130 Water Fountain	S32	4/24/2025	6:59 am	6.21	15	
TCU Toom 105 Water Fountain	S33	4/24/2025	7:02 am	<1.00	15	
TCU Room 107 Water Fountain	S34	4/24/2025	7:05 am	<1.00	15	
Field Blank	FB	4/24/2025	7:15 am	<1.00	15	

4.0 CONCLUSIONS

All lead results were below the 15 µg/L New Jersey Action Level except the results listed in red.

The immediate remedial action required after an exceedance of the lead action level is to remove the water outlet from service. The District should review all the data results and plumbing profiles before deciding on remediation measures. Depending on the data and the plumbing profile some remediation measures may not be efficient at reducing the lead levels, so it is important to evaluate these.

Follow-up flush Samples are required if the Initial first-draw sample result is greater than the lead action level.

5.0 LIMITATIONS, EXCEPTIONS AND ASSUMPTIONS

Opinions and recommendations presented in this report apply to site conditions and features as they existed at the time of Whitman's site visit, and those reasonably foreseeable. They cannot necessarily apply to conditions and features of which Whitman is unaware and has not had the opportunity to evaluate.

The conclusions presented in this report are professional opinions based solely upon Whitman's visual observations of accessible areas, testing data, and current regulatory requirements. These conclusions are intended exclusively for the purpose stated herein, at the sites indicated, and for the project indicated.

No expressed or implied representation or warranty is included or intended in our reports, except that our services were performed, within the limits prescribed by our client, with the customary thoroughness and competence of our profession.

Feel free to contact me at 732-390-5858 with any questions or if further clarification is needed.

Sincerely,

John Beaupre
Senior Vice President