WHITMAN

Creating Solutions. Exceeding Expectations.

LEAD IN DRINKING WATER SAMPLING

FOR

1 – GEORGE WASHINGTON SCHOOL
250 BROADWAY
ELIZABETH, NJ 07206

ELIZABETH PUBLIC SCHOOLS
500 NORTH BROAD STREET
ELIZABETH, NJ 07208

PROJECT 24-05-46T

PERFORMED BY

WHITMAN

July 23, 2024

LEAD IN DRINKING WATER RE-SAMPLING
1 – GEORGE WASHINGTON SCHOOL
250 BROADWAY
ELIZABETH, NJ 07206

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 upon 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	Re-Sample Date	Re-Sample Lead Result – ug/L	NJDEP Lead Limit - µg/L
Room208 Hallway Water Fountain	S1	7/2/2024	6:16 am	<1.00			15
Room 208 Sink	S2	7/2/2024	6:20 am	4.15			15
Room 207 Sink	S3	7/2/2024	6:22 am	3.92			15
Room 206 Sink	S4	7/2/2024	6:25 am	8.56			15
Room 205A Sink	S5	7/2/2024	6:28 am	**15.1**	12/17/2024	4.59	15
Room 205 Sink	S6	7/2/2024	6:32 am	7.48			15
Room 204 Sink	S7	7/2/2024	6:34 am	5.76			15
Room 203 Sink	S8	7/2/2024	6:36 am	4.82			15
Faculty Lounge Hallway Water Fountain	S9	7/2/2024	6:38 am	8.89			15
Room 202 Sink	S10	7/2/2024	6:40 am	1.88			15
Room 201 Sink	S11	7/2/2024	6:41 am	2.77			15
Room 200 Sink	S12	7/2/2024	6:42 am	4.10			15
Room 112 Water Fountain	S13	7/2/2024	6:45 am	<1.00			15
Room 113 Water Fountain	S14	7/2/2024	6:49 am	<1.00			15
Room 114 Hallway Water Fountain	S15	7/2/2024	6:52 am	<1.00			15
Room 115 Water Fountain	S16	7/2/2024	6:54 am	<1.00			15
Room 114 Water Fountain	S17	7/2/2024	6:55 am	<1.00			15
Room 108 Hallway Water Fountain	S18	7/2/2024	6:58 am	<1.00			15

Location	Sample ID #	Date	Time	Lead Result µg/L	Re-Sample Date	Re-Sample Lead Result – ug/L	NJDEP Lead Limit - µg/L
Room 109 Water Fountain	S19	7/2/2024	6:59 am	4.81			15
Room 110 Water Fountain	S20	7/2/2024	7:01 am	7.27			15
Room 111 Water Fountain	S21	7/2/2024	7:03 am	3.80			15
Room 108 Water Fountain	S22	7/2/2024	7:06 am	**18.0**		**Removed from Service**	15
Room 107 Water Fountain	S23	7/2/2024	7:07 am	5.70			15
Room 106 Water Fountain	S24	7/2/2024	7:09 am	<1.00			15
Room 105 Water Fountain	S25	7/2/2024	7:12 am	5.65			15
Room 104 Water Fountain	S26	7/2/2024	7:16 am	2.79			15
Room 103 Water Fountain	S27	7/2/2024	7:17 am	7.16			15
Room 102 Water Fountain	S28	7/2/2024	7:19 am	6.53			15
Room 101 Water Fountain	S29	7/2/2024	7:21 am	4.18			15
Room 100 Water Fountain	S30	7/2/2024	7:22 am	9.43			15
Music Room Hallway Fountain	S31	7/2/2024	7:27 am	<1.00			15
Principal's Office Hallway Water Fountain	S32	7/2/2024	7:31 am	<1.00			15
Room 314 Water Fountain	S33	7/2/2024	7:33 am	4.01			15
Room 313 Hallway Water Fountain	S34	7/2/2024	7:36 am	<1.00			15
Room 310 Hallway Water Fountain	S35	7/2/2024	7:40 am	<1.00			15
Room 308 Sink	S36	7/2/2024	7:42 am	7.36			15
Room 309 Sink	S37	7/2/2024	7:43 am	3.67			15
Room 310 Sink	S38	7/2/2024	7:44 am	5.92			15

Location	Sample ID #	Date	Time	Lead Result µg/L	Re-Sample Date	Re-Sample Lead Result – ug/L	NJDEP Lead Limit - µg/L
Room 307 Sink	S39	7/2/2024	7:52 am	12.5			15
Room 306 Sink	S40	7/2/2024	7:53 am	13.7			15
Room 305 Sink	S41	7/2/2024	7:54 am	6.00			15
Room 304 Sink	S42	7/2/2024	7:58 am	1.46			15
Room 303 Sink	S43	7/2/2024	7:59 am	11.6			15
Room 302 Sink	S44	7/2/2024	8:00 am	7.32			15
Room 302 Hallway Water Fountain	S45	7/2/2024	8:06 am	8.32			15
Outside Girl's Locker Room Hallway Water Fountain	S46	7/2/2024	8:09 am	<1.00			15
Room 505 Sink	S47	7/2/2024	8:12 am	<1.00			15
Room 504 Sink	S48	7/2/2024	8:14 am	1.66			15
Room 503 Sink	S49	7/2/2024	8:17 am	2.11			15
Room 502 Sink	S50	7/2/2024	8:19 am	<1.00			15
Room 501 Sink	S51	7/2/2024	8:20 am	1.62			15
Room 301 Sink	S52	7/2/2024	8:26 am	12.5			15
Room 300 Sink	S53	7/2/2024	8:27 am	1.25			15
Room 321 Sink	S54	7/2/2024	8:28 am	1.04			15
Room 409 Sink	S55	7/2/2024	8:35 am	9.39			15
Room 408 Sink	S56	7/2/2024	8:36 am	11.2			15
Room 407 Sink	S57	7/2/2024	8:37 am	4.19			15
Room 406 Hallway Water Fountain	S58	7/2/2024	8:41 am	3.08			15

Location	Sample ID #	Date	Time	Lead Result µg/L	Re-Sample Date	Re-Sample Lead Result – ug/L	NJDEP Lead Limit - µg/L
Room 404 Sink	S59	7/2/2024	8:47 am	4.88			15
Room 403 Sink	S60	7/2/2024	8:48 am	6.63			15
Room 402 Sink	S61	7/2/2024	8:49 am	1.58			15
Room 403 Hallway Water Fountain	S62	7/2/2024	8:50 am	<1.00			15
Trailer 116 Water Fountain	S63	7/2/2024	8:57 am	<1.00			15
Trailer 117 Water Fountain	S64	7/2/2024	9:00 am	<1.00			15
Trailer 119 Water Fountain	S65	7/2/2024	9:02 am	<1.00			15
Trailer 118 Water Fountain	S66	7/2/2024	9:04 am	<1.00			15
Trailer 120 Water Fountain	S67	7/2/2024	9:06 am	<1.00			15
Trailer 121 Water Fountain	S68	7/2/2024	9:07 am	<1.00			15
Trailer 123 Water Fountain	S69	7/2/2024	9:10 am	<1.00			15
Trailer 122 Water Fountain	S70	7/2/2024	9:11 am	<1.00			15
JDA Nurse Hallway Water Fountain	S71	7/2/2024	9:17 am	1.41			15
Gym Office Hallway Water Fountain	S72	7/2/2024	9:20 am	2.93			15
Cafeteria Water Fountain	S73	7/2/2024	9:24 am	<1.00			15
Prep Sink Slice	S74	7/2/2024	9:30 am	2.36			15
Prep Sink Mixer	S75	7/2/2024	9:31 am	4.27			15
Prep Sink Stove	S76	7/2/2024	9:33 am	<1.00			15
Field Blank	FB	7/2/2024	9:40 am	<1.00			15

4.0 CONCLUSIONS

All lead re-sample results were below the 15 µg/L New Jersey 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