

December 19, 2016

Mr. Edwin Martin
Facilities Coordinator
Ballston Spa School District
70 Malta Ave
Ballston Spa, NY 12020

**RE: Water Sampling for Lead Content at
Ballston Spa High School and Ballston Spa Middle School:**

Ballston Spa High School – 220 Ballston Ave, Ballston Spa, NY 12020
Ballston Spa Middle School – 210 Ballston Ave, Ballston Spa, NY 12020

PSI Project Number: 08212369

Dear Mr. Martin,

In accordance with your request, Professional Service Industries, Inc. (PSI), conducted initial first-draw lead-in-water testing of potable water sources at the above referenced middle school, and senior high school facilities. The sample's lead concentrations were compared to the New York State action limit established by emergency regulation enacted on September 6, 2016 and included in the Subpart 67-4 of Title 10 Official Compilation of Codes, Rules and Regulations of New York, establishing an action level for lead in public school drinking water of 0.015 milligrams per liter (mg/L).

PSI was authorized to conduct the lead-in-water sampling and analysis on 9/7/2016 by Mr. Edwin Martin, Facilities Coordinator of the Ballston Spa School District, by signed Purchase Order No. 17-01102. The associated PSI Proposal number is 0821-195607

SCOPE

Initial first draw water samples were collected from potable water outlets at the Ballston Spa High School first and second floors and the Ballston Spa Middle School. The samples were collected from accessible potable water sources in the subject schools, including kitchen sinks, bathroom sinks, water fountains (bubblers) and other outlets that were indicated by the school district on sample location maps provided to PSI prior to sampling. The total number of samples to be collected and the sample locations to be collected from were provided by the school district prior to sampling.

METHODOLOGY

The following samples were collected by PSI:

| School Location/Name | Number of Samples | Date Collected | PSI Technician |
|-------------------------|-------------------|----------------|----------------|
| BSPA High School | 286 | 10/16/2016 | Daniel Gerke |
| BSPA Middle School | 141 | 10/22/2016 | Daniel Gerke |
| BSPA High School | 10 | 10/26/2016 | Daniel Gerke |
| BSPA Middle School | 1 | 10/26/2016 | Daniel Gerke |
| Total Samples Collected | 438 | | |

The 'first draw' water samples were collected from water fountains, classroom sinks, bathroom sinks (cold-water faucets and spigots) and other locations of interest. The sampled outlets had been isolated from service by school district personnel for more than 8 hours but less than 18 hours. The samples were collected directly into laboratory-supplied 250 ml bottles containing a HNO₃ preservative solution.

The samples were delivered and transferred under chain of custody to Pace Analytical Services Inc laboratory facility at 2190 Technology Drive, Schenectady NY. Analysis for Lead was performed at Pace Analytical Services Inc. Laboratories in Minneapolis, MN (NYS-DOH Lab Cert # 11647).

All samples were analyzed for lead content by EPA Method 200.8, Inductively Coupled Plasma Mass-Spectrometry.

RESULTS

Analytical results, and chain-of-custody paperwork, may be found in Appendices A and B. Sample locations may be found in the attached site maps appendix C and D. Analytical results indicating concentrations at or exceeding the New York State Action Level drinking water standard for lead of 0.015 milligrams per liter (mg/L) (also 15 ug/L) are displayed on the tables below.

Ballston Spa High School

The table presented below identifies the potable water sample locations whose lead (Pb) concentration results were at or above the 15 ug/L (0.015 mg/L) action level. Thirty-Four (34) of the 296 samples collected at this facility exceeded the NYS-DOH Action Level for lead-in-drinking water. Highlighted concentrations were greater than 10 times the action limit.

Sample collection notes:

- (1.) No sample was collected during the first sampling event from sample locations BSPA-026 U, BSPA-041 U, BSPA-048 U, BSPA-062 U, BSPA-079 U, BSPA-095 U, BSPA-118 U and BSPA-073 D (L) on 10/16/16 these locations were non-functional at the time of sampling. These locations were collected during a second round of sampling on 10/26/16.
- (2.) No sample was collected from sample locations BSPA-001 L and BSPA-049 U. No corresponding outlets were found at these locations.

Table 1. Sample locations above NYS Action level

| Sample Location: High School 1st (Lower) Floor | Lab Sample ID No. | Lead (Pb) Analytical Result (ug/L) |
|--|--------------------------|---|
| BSPA 072 (L) | 10368916072 | 20.6 |
| BSPA 080 (L) | 10368916079 | 18.7 |
| BSPA 090 (L) | 10368916089 | 185 |
| BSPA 100 (L) | 10368916099 | 39.9 |
| BSPA 125 (L) | 10368916124 | 39.8 |
| BSPA 127 (L) | 10368916126 | 39.9 |
| Sample Location: High School 2nd (Upper) Floor | Lab Sample ID No. | Lead (Pb) Analytical Result (ug/L) |
| BSPA-004 (U) | 10368677004 | 64.2 |
| BSPA-020 (U) | 10368677020 | 15.1 |
| BSPA-026 (U) | 10369784001 | 122 |
| BSPA-041 (U) | 10369784002 | 107 |
| BSPA-045 (U) | 10368677043 | 41.8 |
| BSPA-048 (U) | 10369784003 | 32.9 |
| BSPA-050 (U) | 10368677046 | 212 |
| BSPA-053 (U) | 10368677049 | 26.7 |
| BSPA-054 (U) | 10368677050 | 19.0 |
| BSPA-063 (U) | 10368677058 | 16.0 |
| BSPA-064 (U) | 10368677059 | 140 |
| BSPA-065 (U) | 10368677060 | 36.2 |
| BSPA-079 (U) | 10369784005 | 24.0 |
| BSPA-080 (U) | 10368677074 | 42.0 |
| BSPA-081 (U) | 10368677075 | 76.0 |
| BSPA-094 (U) | 10368677088 | 56.1 |
| BSPA-095 (U) | 10369784008 | 150 |
| BSPA-101 (U) | 10368677094 | 712 |
| BSPA-106 (U) | 10368677099 | 57.2 |
| BSPA-113 (U) | 10368677106 | 17.1 |
| BSPA-114 (U) | 10368677107 | 73.8 |
| BSPA-115 (U) | 10368677108 | 252 |
| BSPA-117 (U) | 10368677110 | 203 |
| BSPA-118 (U) | 10369784009 | 268 |
| BSPA-122 (U) | 10368677114 | 17.7 |
| BSPA-127 (U) | 10368677119 | 276 |
| BSPA-150 (U) | 10368677142 | 22.0 |
| BSPA-153 (U) | 10368677145 | 18.4 |

See Site Map in Appendix C for outlet locations, bold highlighted concentrations are >10X the action limit.

Ballston Spa Middle School

The table presented below identifies the potable water sample locations whose lead (Pb) concentration results were at or above the 15 PPB (0.015 mg/L) action level. Fifty-five (55) of the 140 samples collected at this facility exceeded the NYS DOH Action Level for lead-in-drinking water. Concentration results that are greater than 10 times the action limit are highlighted in bold.

Sample collection notes:

- (1.) No sample was collected from sample locations BSP MS 014 and BSP MS 029 on the initial sample collection event on 10/22/16. These locations were non-functional at the time of collection.
- (2.) Sample location BSP MS 014 was collected during a second round of sampling on 10/26/16.

Table 2. Sample locations above NYS Action Level

| Sample Location: (Middle School) | Lab Sample ID No. | Lead (Pb) Analytical Result (ug/L) |
|---|--------------------------|---|
| BSP MS 001 | 10369772001 | 71.8 |
| BSP MS 003 | 10369772003 | 145 |
| BSP MS 004 | 10369772004 | 42.5 |
| BSP MS 005 | 10369772005 | 16.7 |
| BSP MS 009 | 10369772009 | 120 |
| BSP MS 017 | 10369772016 | 276 |
| BSP MS 018 | 10369772017 | 49.5 |
| BSP MS 019 | 10369772018 | 103 |
| BSP MS 020 | 10369772019 | 122 |
| BSP MS 021 | 10369772020 | 95.1 |
| BSP MS 022 | 10369772021 | 257 |
| BSP MS 023 | 10369772022 | 58.8 |
| BSP MS 024 | 10369772023 | 86.2 |
| BSP MS 025 | 10369772024 | 136 |
| BSP MS 026 | 10369772025 | 46.3 |
| BSP MS 027 | 10369772026 | 56.8 |
| BSP MS 028 | 10369772027 | 148 |
| BSP MS 030 | 10369772028 | 84.0 |
| BSP MS 031 | 10369772029 | 77.3 |
| BSP MS 032 | 10369772030 | 347 |
| BSP MS 033 | 10369772031 | 27.1 |
| BSP MS 035 | 10369772033 | 143 |
| BSP MS 046 | 10369772044 | 17.8 |
| BSP MS 047 | 10369772045 | 340 |

| | | |
|------------|-------------|------------|
| BSP MS 048 | 10369772046 | 340 |
| BSP MS 054 | 10369772052 | 58.0 |
| BSP MS 056 | 10369772054 | 56.8 |
| BSP MS 057 | 10369772055 | 270 |
| BSP MS 058 | 10369772056 | 54.2 |
| BSP MS 059 | 10369772057 | 51.6 |
| | | |
| BSP MS 064 | 10369772062 | 35.5 |
| BSP MS 066 | 10369772064 | 53.2 |
| BSP MS 075 | 10369772073 | 29.7 |
| BSP MS 078 | 10369772076 | 38.2 |
| BSP MS 079 | 10369772077 | 30.1 |
| BSP MS 080 | 10369772078 | 105 |
| BSP MS 081 | 10369772079 | 101 |
| BSP MS 082 | 10369772080 | 359 |
| BSP MS 098 | 10369772096 | 22.3 |
| BSP MS 101 | 10369772099 | 31.6 |
| BSP MS 102 | 10369772100 | 61.4 |
| BSP MS 104 | 10369772102 | 16.2 |
| BSP MS 109 | 10369772107 | 144 |
| BSP MS 110 | 10369772108 | 28.7 |
| BSP MS 118 | 10369772116 | 71.5 |
| BSP MS 119 | 10369772117 | 62.8 |
| BSP MS 124 | 10369772122 | 40.9 |
| BSP MS 133 | 10369772131 | 19.4 |
| BSP MS 134 | 10369772132 | 22.0 |
| BSP MS 136 | 10369772134 | 16.3 |
| | | |
| BSP MS 140 | 10369772138 | 343 |
| BSP MS 141 | 10369772139 | 37.5 |
| BSP MS 142 | 10369772140 | 225 |

See Site Map in Appendix D for outlet locations. Bold highlighted concentrations are >10X the action limit.

CONCLUSIONS

A total of thirty-four (34) sampled outlets at the high school and fifty-five (55) sample at the middle school exhibited Pb water concentrations that exceeded the NYS-DOH action level of 15 ppb or µg/L (0.015 mg/L) at the time of PSI's sampling.

Additionally, 19 of the 438 total outlets sampled at both schools had Pb concentrations between approximately 10 ppb to 15 ppb, which is below, but close to the action level.

Please find the Laboratory analytical results in appendix A and B attached for your review.

RECOMMENDATIONS

Per NYS-DOH Regulations, where the initial first-draw water sample lead concentration exceeds the action level, the school shall:

- a. prohibit use of the outlet until:
 1. a lead remediation plan is implemented to mitigate the lead level of such outlet; and
 2. test results indicate that the lead levels are at or below the action level;
- b. provide building occupants with an adequate supply of potable water for drinking and cooking until remediation is performed.
- c. report the test results to the local health department as soon as possible, but no more the 1 business day after the school receives the laboratory report; and
- d. notify all staff and all persons in parental relation to students of the test results, in writing, as soon as practicable but not more than 10 business days after the school receives the laboratory report.

The School District may also want to consider conducting re-testing or remediation of the 19 other outlets where Pb concentrations were determined to be between approximately 10 to 15 µg/L, which is below but near the action level.

WARRANTY

The field observations, measurements, and research reported herein are considered sufficient in detail and scope to form for the analysis of the selected water quality parameters. The investigation and conclusions presented herein are based upon the subjective evaluation of limited data. They may not represent all conditions at the subject site as they reflect the information gathered from specific locations. PSI warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted environmental investigation methodology and only for the site described in this report.

The water quality sampling and analysis has been developed to provide the client with information regarding select parameter concentrations in the water samples collected at the subject property. It is necessarily limited to the conditions observed and to the information available at the time of the work.

Due to the limited nature of the work, there is a possibility that there may exist conditions which could not be identified within the scope of the assessment or which were not apparent at the time of report preparation. It is also possible that the testing methods employed at the time of the report may later be superseded by other methods. PSI does not accept responsibility for changes in the state of the art, nor for changes in the regulations. PSI believes that the findings and conclusions provided in this report are reasonable. However, no other warranties are implied or expressed.

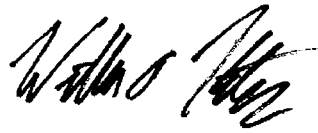
This report for the above referenced property represents the product of PSI's professional expertise and judgment in the environmental and industrial hygiene consulting industry. This report is certified to, can be relied upon by, and has been prepared for the exclusive use of the client.

PSI appreciates you selecting our services for your needs. Please contact us at 518-377-9841 should you have any questions regarding this report.

Respectfully,
PROFESSIONAL SERVICE INDUSTRIES, INC.



John J. Tranter
District Manager



William A. Kotas
Project Manager



Joseph L. Kuchnicki, CIE, CHMM
Principal Consultant

Appendices:

- A Laboratory Analysis Reports & Chain-of-Custody (High School)
- B Laboratory Analysis Reports & Chain-of-Custody (Middle School)
- C Site Location Maps (High School)
- D Site Location Maps (Middle School)
- E Laboratory NYS-DOH ELAP Certification