Quality Assurance Project Plan (QAPP)
For
Drinking Water Sampling
of Lead Concentrations in School Drinking Water Outlets

Pascack Valley Regional High School District

Approvals

School District Representatives:

Program Manager: ~~P. Erik Gundersen~~ _____ _____ 6/30/2017
Print Name Signature Date

Project Manager(s): Allan Martin _____ _____ 6/30/2017
Print Name Signature Date

Individual School Project Officer(s) (See page iii)

Third Party Sampling Firm: Health and Safety Services, Inc.
(Note N/A if Third Party not involved) Name of Firm

Jim Proctor _____ X _____ 6/29/17
Print Name Signature Date

Laboratory: IATL International Asbestos Testing Laboratories
Name of Laboratory

Laboratory Manager: Frank E. Ehrenfeld, III _____ X _____ 06.29.17
Print Name Signature Date

Laboratory QA Officer: John Napolitan _____ X _____ 6/29/17
Print Name Signature Date

For additional laboratories conducting sampling and or analysis use additional sheet for sign-off.

Laboratory: _____
Name of Laboratory

Laboratory Manager: _____ _____ _____
Print Name Signature Date

Laboratory QA Officer: _____ _____ _____

Laboratory: _____
Name of Laboratory

Laboratory Manager: _____ _____ _____
Print Name Signature Date

Laboratory QA Officer: _____ _____ _____

Laboratory: _____
Name of Laboratory

Laboratory Manager: _____ _____ _____
Print Name Signature Date

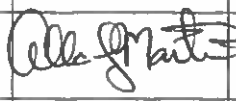
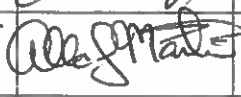
Laboratory QA Officer: _____ _____ _____

Laboratory: _____
Name of Laboratory

Laboratory Manager: _____ _____ _____
Print Name Signature Date

Laboratory QA Officer: _____ _____ _____

Individual School Project Officers (ISPO)

School	Name	Title	Signature	Date
Pascack Hills High School	Allan Martin Phone: 201-358-7020 x22021	Facilities Manager		6/30/17
Pascack Hills High School	Alex Toth Phone: 201-661-0474	Maintenance Supervisor		6/30/17
Pascack Hills High School	Carol Marshall Phone: 201-906-5073	Plumber		6/30/17
Pascack Valley High School	Allan Martin Phone: 201-358-7020 x22021	Facilities Manager		6/30/17
Pascack Valley High School	Alex Toth Phone: 201-661-0474	Maintenance Supervisor		6/30/17
Pascack Valley High School	Carol Marshall Phone: 201-906-5073	Plumber		
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Add additional sheets as necessary.

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1. Objective & Goals/Background

1.1 Objective and Goals

A Quality Assurance Project Plan is a document that describes the planning, implementation and evaluation steps involved in the acquisition of data that will be used to arrive at a specific goal. The overall objective for this QAPP is to determine the lead concentration at drinking water outlets within the District's schools so that corrective action(s) may be implemented at any drinking water outlets sampled found to exceed the US Environmental Protection Agency (USEPA) drinking water lead action level of 15 micrograms per liter (µg/L).

> *For the purposes of compliance, any concentration greater than 15 µg/L (as defined as greater than or equal to 15.5 µg/L) is considered to exceed the lead action level.*

The lead sampling will consist of the collection of a first draw (initial) sample according to this QAPP and the *School District Lead Water Testing Sampling Plan* (Sampling Plan). The drinking water outlets can be faucets, drinking water fountains (or bubblers) and water coolers (see Sampling Plan for details).

Follow-up sampling will also be covered by this QAPP and the Sampling Plan. An optional follow-up flushed sample may be analyzed at selected drinking water outlets after flushing for 30 seconds. (An exception to the 30 second follow-up flushed sample is for a water cooler which requires a different follow-up sampling timeframe).

The analytical results and field data will be used by the Project Manager and the District (See Section 2.2) to determine whether drinking water distributed from drinking water outlets such as water fountains (bubblers), faucets, food preparation areas and water coolers have concentrations of lead that exceed 15 µg/L. If a first draw (initial) or follow-up flushed cold water sample is found to contain lead at a concentration greater than 15 µg/L, the Project Manager will instruct the Individual School Project Officer (Project Officer) (See Section 2.3) to isolate the source of drinking water by turning off the device or providing a barrier to the consumption of the water (tape and bag) until appropriate remediation is determined.

1.2 Background

Lead is a toxic metal that can be harmful to human health when ingested. Young children are particularly sensitive to the effects of lead because their bodies are still undergoing development. Lead can get into drinking water by being present in the source water or by interaction of the water with plumbing materials containing lead

(through corrosion). Common sources of lead in drinking water include: solder, fluxes, pipes and pipe fittings, fixtures, and sediments. It is possible that different drinking water outlets in a given building could have dissimilar concentrations of lead.

In April 1994, USEPA prepared two guidance documents to assist municipalities in meeting the requirements of the Lead Contamination and Control Act (LCCA): *Lead in Drinking Water in Schools and Non-Residential Buildings (*EPA 812-B-94-002) and *Sampling for Lead in Drinking Water in Nursery Schools and Day Care Facilities* (EPA 812-B-94-003). In December 2005, amended October 2006, EPA issued the revised technical guidance document *3Ts for Reducing Lead in Drinking Water in Schools (EPA 816-B-05-008)* which replaced the *Lead in Drinking Water in Schools and Non-Residential Buildings* (EPA 812-B-94-002). The 3Ts Revised Technical Guidance document is meant to assist school officials in implementing programs and policies to reduce children's exposure to lead in drinking water in schools.

2. Project/Task Organization

2.1 School District Program Manager (Program Manager)

The School District Program Manager is the overall authority in the execution of the District's lead sampling project. He/she is responsible for the initial notification to the District of the testing program, obtaining funds for testing, assigning the Project Manager, requesting/enlisting the assistance from other District departments if needed, approving the District's QAPP(s), approving the Final Report for each school and coordinating with other District officials to make the results of the testing available to the public. The Project Manager reports to the Program Manager.

2.2 School District Project Manager (Project Manager)

The Project Manager is responsible for overseeing the execution of lead sampling at each of the district's schools. This involves the prioritization of schools to be sampled, and adherence with the District's Sampling Plan and QAPP. He/she serves as the liaison between the School District, State agencies, local Health Departments, laboratories and public water systems (if applicable). He/she reports to the Program Manager.

<u>The Project Manager's responsibilities include</u>:

- Preparing the District's Specific QAPP
- Managing the Sampling Plan and QAPP.

- Oversight of Individual School Project Officers (Project Officers) to ensure that they adhere to the Sampling Plan procedures and the QAPP.
- Purchasing of equipment needed for district lead sampling
- Coordination with New Jersey laboratories certified for lead in drinking water
- Coordination with Project Officers to establish sampling schedules
- Ensuring properly signed QAPPs are in place prior to initiation of sampling
- Verify that officials from each school are aware when sampling is scheduled and the expected duration
- Review of the School Field Sampling Summary Reports prepared by Project Officers
- Review of Laboratory Data Reports (LDR) from Laboratory Managers
- Review of Final Project Reports prepared by Project Officers. Identify limitations in the use of any laboratory data due to information provided in the accompanying School Field Sampling Summary Report.
- Maintain the original signed QAPP(s)
- Maintain documents, reports and records listed in Section 14 of the QAPP
    - Laboratory Data Reports (LDR)
    - Copy of Field Sampling Summary Report with copies of field logbooks, field Walk-Through reports including Attachments B, C, D, E, and F of the Lead Sampling Plan, chains of custody and flush tags.
    - Copy of Final Project Report
- Maintenance of other relevant records such as:
    - Purchase orders for analytical costs (copy).
    - Agreement with laboratory to sample/analyze/report with details for payment
    - Receipts (originals or copies)

2.3 Individual School Project Officer(s)

The Individual School Project Officer's responsibilities include:

- General project oversight for assigned school(s).
- Generate field log book for each assigned school. Document field activities including any changes to procedures outlined in the Sampling Plan or QAPP.
- Ensure proper completion of the Plumbing Profile for assigned school(s) - See Attachment B of the Sampling Plan.
- Oversight of completion of the following reports found in the Sampling Plan which require sign–off by Project Officer:
    - Drinking Water Outlet Inventory (Sampling Plan Attachment C)
    - Filter Inventory Report (Sampling Plan Attachment D)
    - Flushing Log (Sampling Plan Attachment E)

    - Pre Sampling Water Use Certification (Sampling Plan Attachment F).
- Prepare labels for drinking water outlets to be sampled.
- Prepare for Walk-Thru including acquisition of School Floor Plan.
- Attend school Walk-Thru.
- Ensure proper completion of Walk-Thru documentation including identification of drinking water outlets on Floor Plan, and Sampling Location Inventory with coding according to the Sampling Plan (Attachment C of Sampling Plan).
- Supervision of field activities such as Walk- Thru, flushing (if required), locking school prior to sampling, and sample collection.
- Identify drinking water outlets to be flushed and attach flush tag.
- Ensure that Field Sampling Team has all relevant sampling supplies including sampling bottles, labels, proper reagent water and chains of custody prior to collection of samples.
- Ensure that all drinking water outlets to be sampled prior to sampling event are labeled.
- Ensure that any low-use drinking water outlets identified for sampling had been flushed.
- Remove flush tags from drinking water outlet once sampling is completed.
- Responsible for ensuring water remains motionless for a minimum of eight hours (last to leave the school) prior to sampling event by following procedures in Section 8 of Sampling Plan.
- Verify that the Sampling Plan was followed prior to initiating sampling by completing the Pre-Sampling Water Use Certification (Attachment F in Sampling Plan).
- Supervision of sampling event.
- Documentation of issues during sampling event in field log book.
- Preparation of Field Walk-Thru Report, School Field Sampling Summary Report and Final Project Report for assigned school(s).
- Maintenance of field log books for each school.
- Prepare samples for shipment and delivery to laboratory per certified laboratory instructions.
- Ensure that samples are delivered to laboratory within the time period specified by the certified laboratory

2.4 Laboratory Manager

The Laboratory Manager is responsible for:

- Supervising laboratory analyses to be performed in the Laboratory. This includes oversight of all QA requirements in the laboratory, data review, and qualification of the data.
- Providing the Laboratory Data Report Package to the Project Manager and Project Officer.

2.5 Laboratory's Quality Assurance Officer (LQAO)

The Laboratory's Quality Assurance Officer (LQAO) is responsible for reviewing the QAPP and resolving any QA issues that may arise during the project.

2.6 Field Sampler or Field Sampling Team

The Field Sampler or Field Sampling Team, whether affiliated with the District, NJ certified laboratory, and/or Environmental Consulting Firm, is responsible for ensuring that field activities are conducted in accordance with this QAPP and the Sampling Plan.

3. Special Training Needs/Certification

Sampling will be performed by the District, a certified Laboratory, or an Environmental Consulting Firm-designated Sampling Team staff. Staff performing the sample collection will be properly trained in sampling techniques.

Laboratory personnel designated to analyze the samples will have successfully completed required demonstrations of capability for the methods used. The Laboratory must be a drinking water laboratory certified by New Jersey for the analysis and reporting of lead using USEPA drinking water methods which are listed in Section 8.

Assessments of the Laboratory capability are conducted on a bi-annual basis by the NJDEP Office of Quality Assurance. The Laboratory Manager has responsibility for correction of all deficiencies in their laboratory program.

4. Project/Task Description

Drinking water samples will be collected from drinking water outlets including water fountains (bubblers), food preparation outlets (located in the cafeteria, kitchen, and home economics classrooms) and other outlets where there is the possibility of drinking the water such as in the special education classrooms, the medical office, the teachers' lounge, and ice machines. Concession stands and outside water fountains (such as in playgrounds and athletic fields) may also be considered for sampling. The custodian sink faucet may also be considered for sampling if it is used for filling large water coolers to provide water at school events. Outside hose spigots are not appropriate sampling locations for the purpose of this QAPP. The Sampling Plan provides more detail on appropriate sampling locations.

The Field Sampler or Team will conduct first draw (initial) sample collection and, as appropriate, follow-up flushed sample collection at the drinking water outlets specified in the Sampling Plan. The Sampling Team will consist of the Project Officer and the Sampler who will be affiliated with either the District, Laboratory, or the Environmental

Consulting Firm. The NJ Certified Laboratory specified in the QAPP will perform the analysis for lead.

5. Lead Data Quality Objectives and Criteria for Measurement

5.1 Precision

The NJ Certified Laboratory will perform replicate analysis of the Laboratory Control Standard (LCS) for every set of individual school samples to assess method precision. This is not a requirement of any of the USEPA approved methods for lead analysis. The acceptance criterion for replicate analysis is a maximum of 20 percent (%) Relative Percent Difference (RPD). In addition to the LCS data, a duplicate laboratory fortified blank (LFB) or a matrix spike and a matrix spike duplicate (MS/MSD) will also provide precision information.

5.2 Bias

As part of the analytical methodology, the NJ Certified Laboratory will perform analysis of laboratory fortified blanks (LFB) to assess accuracy/bias. The acceptance criterion for accuracy is for the results to be within plus or minus 15% recovery of the known value.

A field reagent blank (FRB) must be collected for each school. The FRB is normally only a requirement for USEPA Method 200.8, however the collection of a FRB is required with any of the other approved lead methods for this sampling event. The information provided by the results is used to determine whether the field or sample transporting procedures and environmental effects have contributed to contamination of the sample.

If any sample result(s) are qualified, this must be clearly indicated on the report and all final reports such as the field summary report. The Project Manager must be consulted to determine how to deal with the qualified results.

5.3 Representativeness

The sampling effort is designed to identify all drinking water outlets, within a school, where there is a potential for water consumption such as at water fountains (bubblers) that may require corrective action due to first draw and/or follow-up flushed sample results that exceed 15 µg/L of lead (as defined as greater than or equal to 15.5 µg/L or greater). Food preparation outlets and other potential ingestion outlets such as special education classrooms, the medical office and bathroom sinks are to be considered for sampling.

5.4 Comparability

The analytical methods for lead analysis in drinking water are found in the federal Safe Drinking Water Regulations at 40 CFR141.86 and 40 CFR 141 Appendix A to Subpart C. Use of these methods allows for the comparison of data to USEPA's drinking water action level for lead of greater than 15 µg/L.

Analytical results from the first draw (initial) and the follow-up flushed samples will be compared to assist in determining the source of lead contamination. Appropriate corrective measures must then be taken by the District.

For those school facilities with their own source (classified as a nontransient noncommunity water system), the results should be submitted to the NJDEP and used to assess compliance with the action levels in EPA's Lead and Copper Rule.

5.5 Completeness

In order to satisfy the objective of the project, samples will be collected from drinking water outlets according to the sampling plan established in this QAPP.

One hundred percent (100%) of collected and verified samples will be analyzed and reported.

5.6 Sensitivity

The Laboratory's Reporting Limit (RL) for the determination of lead in drinking water samples must be no higher than 2 µg/L which is lower than the regulatory Practical Quantitation Level for lead of 5 µg/L. The Practical Quantitation Level for Lead is stated in the National Primary Drinking Water Contaminant Regulations 40 CFR141 Subpart I. The required reporting limit of 2 µg/L for this QAPP is achievable with any of the approved USEPA methods listed in 11.1.

6. Secondary Data

Secondary data for the District would be their historical lead data.

7. Field Monitoring Requirements

Sampling may occur in the morning hours before schools are open or on weekdays or weekends when no school activities are expected. This will minimize the potential for people in the building to use water during the sampling survey. While sampling is underway it is advisable to prohibit any persons other than the sampling team to enter

the building in order to ensure that no toilets or water outlets are being used.

7.1 Monitoring Process Design

The sampling design, described in detail in the Sampling Plan (Appendix B) is based in part upon the 3T's Guidance for Reducing Lead in Drinking Water in Schools: Revised Technical Guidance, December 2005; Errata to 3Ts, October 2006 (see Appendix A).

7.2 Monitoring Methods

Equipment and supplies that will be needed to perform the sampling survey are ASTM Type I reagent-grade water for the field reagent blank (FRB), latex non-colored gloves, pre-cleaned HDPE wide-mouth 250 mL single use rigid sample containers ("sample container") and chain of custody (COC forms-Appendix C or lab may use their own) and indelible ink/marker.

For sampling events where the Laboratory will collect the samples, the nitric acid can be either added to the collection bottle at the Laboratory and prior to collection or the nitric acid can be added at the school after collection of the sample. If the water samples are not acidified at the time of collection, the Laboratory will preserve all samples with laboratory grade concentrated nitric acid (HNO_3) to a pH of 2 standard units (SU) or less within 48 hours of sample receipt.

Each school will have a separate sample cooler or box which will contain the field reagent blank (FRB) and the other samples collected. Samples will be transported by Laboratory or Samplers or appropriate representative to the Laboratory.

7.3 Field Quality Control

The analytical results obtained from the FRB will determine whether field or sample transporting procedures is a cause of sample contamination.

Prior to the sampling event, the Sampler will collect a 250 mL ASTM Type I reagent-grade water from the Laboratory which will be used for the FRB. At the school and prior to the first sample collected at a school, the ASTM Type I reagent-grade water will be transferred into a sample container which will be identified as the FRB sample.

The ASTM Type I reagent-grade water will either be supplied by the Laboratory or purchased through a vendor. The 250 mL sample containers are purchased pre-cleaned. Sample containers are not to be reused.

8. Analytical Requirements

8.1 Analytical Methods

The School District must use one of the USEPA approved drinking water methods listed in the table below for the analysis of lead. Any of these methods can be used provided that the Laboratory is certified to analyze and report lead by that method and that the Laboratory has a reporting limit no greater than 2 µg/L.

For the purposes of the School District's QAPP, the analytical performance information is as follows:

Analyte	Analytical Method	Sample Matrix	Recommended Guidance Level	Reporting Level
Lead (Pb)	USEPA Method 200.8 USEPA Method 200.9 USEPA Method 200.5 SM 3113B ASTM D3559-D	Drinking Water	Greater than 15 µg/L (15.5 µg/L and above) first draw (initial) sample	2.0 µg/L (ppb)

The pH of all samples must be checked at the time of receipt at the Laboratory. If the pH is not less than 2, the pH must be adjusted with the addition of nitric acid. Samples that require the addition of nitric acid must sit for 16 hours prior to digestion (if applicable) or analysis. The pH of each sample must be documented.

The turbidity of each sample must also be checked at the time of receipt at the Laboratory. If the turbidity of the sample is greater than 1 NTU, the sample must be digested prior to analysis. The turbidity of each sample must be documented and those samples digested must be recorded by the Laboratory.

If a sample result exceeds 90% of the linear dynamic range, the sample must be diluted and re-analyzed. The dilution factor must be included in the Laboratory report for each sample that is diluted.

8.2 Analytical Quality Control

The USEPA has established protocols for the analysis of Quality Control (QC) samples with each analytical batch of samples, generally defined as a maximum of twenty samples. All QC results must be assessed and evaluated on an on-going basis and QC acceptance criteria must be used to determine the validity of the data.

For analytical testing, the laboratory includes positive control samples Laboratory Control Sample (LCS) or Analytical Quality Control (AQC)] to evaluate the total

analytical system. Negative control samples (Method Blanks) are used to assess the preparation batch for possible contamination during the preparation and processing steps. A blank is considered contaminated with any result at or above the analyte reporting limit. Specific control samples (Matrix Spikes) are used to indicate the effect of the sample matrix and replicates (matrix spike, LCS replicate) are performed to assess the precision of the results generated.

Specific information regarding acceptance criteria and corrective actions is documented in the Laboratory's SOP for any of the analytical methods listed in the table above.

9. Sample Handling and Custody Requirements

All samples are aqueous and will be collected and labeled by the laboratory. Standard USEPA Chain of Custody (COC) procedures will be followed according to the information provided in the District's Sampling Plan (Appendix B). The COC form found in Appendix C or equivalent is to be used for this project.

Samples will be transported by Laboratory or Samplers or appropriate representative to the Laboratory.

Analyte	Sample Volume	Container	Preservation (Note1)	Holding Time
Lead (Pb)	250 mL	unused 250 mL rigid plastic wide-mouth – clean	Reagent Grade Nitric Acid (HNO_3) pH < 2	6 months

Note 1. Sample preservation will be conducted either in the field or by the Laboratory upon receipt.

9.1 Sample Archive/Disposal

The samples received by the Laboratory for each school, including any digestates, will be eligible for disposal at a minimum 30 days unless otherwise directed by the District after the final report has been distributed. Samples including any digestates will not be archived unless a written request is provided to the Laboratory.

10. Instrument/Equipment Testing, Inspection, Maintenance & Calibration Requirements

10.1 Instrument/Equipment Testing, Inspection and Maintenance

All laboratory equipment will be tested, calibrated, and maintained in accordance with existing SOPs approved by the laboratory.

There are no field instruments anticipated for this project.

10.2 Instrument/Equipment Calibration and Frequency

The USEPA approved analytical methods for lead listed in the National Primary Drinking Water Contaminant Regulations at 40 CFR 141.23 and Appendix A to Subpart C require that the instrument calibration be performed on a daily basis.

10.3 Inspection/Acceptance of Supplies and Consumables

250 mL sample containers are purchased pre-cleaned. Sample containers are not to be reused. Sample gloves are to be disposable, non-colored and not reused.

11. Data Management

The Laboratory will immediately notify the Project Manager and Project Officer of the affected school(s) upon receipt of any validated laboratory results that exceed the action level for lead in drinking water that is greater than 15 µg/L (as defined as greater than or equal to 15.5 µg/L). For all results, the Laboratory will provide the result in micrograms per liter (µg/L) and to at least three (3) significant figures (i.e.19.6 µg/L or 20.4 µg/L).

The Laboratory will provide a final electronic copy of the Lead Data Report Package (LDR) for each school that will consist of: 1) PDF cover sheet that identifies the school name and all qualifiers with a description for that qualifier used by the laboratory, 2) laboratory report of the analytical results in PDF format, 3) the chain of custody in PDF format and 4) an Excel spreadsheet of the results. The Excel spreadsheet must include the information outlined in the Excel template provided in Appendix D. Information required to be included in separate columns includes but is not limited to; the field ID (sample location identifier and/or code), the Laboratory sample ID, the Laboratory Name and Laboratory certification number, whether the sample was flushed, the date and time of collection and analysis, the analytical method, the analytical result in µg/L, the reporting limit in µg/L, and whether the sample was diluted or digested and any qualifiers.

The LDR Package will include the analytical results, appropriate qualifiers and reporting limits for analyses of submitted samples as requested by the District. The LDR Package must include explanations of any relevant procedural deviations or anomalies associated with the sample handling and analysis of the project. This report will be completed within the timeframe indicated in the contract. (see Section 5).

12. Assessments/Oversight

Formal field audits by QA personnel may be conducted for this project. However, identification of problems related to technical performance will be the responsibility of the staff working on this project.

The Project Officer(s) will assess any problem that arises in the field. If necessary, modifications to technical procedures may be considered. Any changes in technical procedures will be documented in the field logbook, evaluated to determine if there will be any impact to the data and then highlighted in the Final Project Report.

The Laboratory personnel will perform self-audits and institute corrective actions in accordance with their respective written procedures.

13. Data Review, Verification, Validation, and Usability

13.1 Data Review, Verification and Validation

The Project Manager will evaluate the School Field Sampling Summary Reports against the final analytical results to determine if any field observations may have contributed to lower or higher analytical results.

The Project Manager will review the analytical report and determine any limitations on the use of the data (see Section 5.2 Bias of this QAPP) and include these limitations in the Final Project Report.

Data review of all laboratory generated data is performed by the Laboratory Quality Assurance Officer (LQAO) who is not associated with the actual measurement operations for the given analytical batch but knowledgeable in the analytical processes employed. It is the responsibility of the LQAO to ensure that all data generated are correct and of known and documented quality. Once the review is completed, the LQAO will sign and date the appropriate QA/QC checklist according to the Laboratory's SOP. Any limitations on the use of data (e.g. data qualifiers) will be included in the Final Project Report.

13.2 Reconciliation with User Requirements

As long as the Field Sampling Summary Report, LDR Package and Final Project Report of this QAPP are satisfied, the data will be useable for the purpose intended and no further assessment is required. If any data are determined to be unusable by the Project Manager, re-sampling may be required.

14. Reporting, Documents and Records

Original documents (X) will be stored as follows:

Document:	Individual School *Project Officer*	School District *Project Manager*	School District *Program Manager*
QAPP	Copy	X	Copy
Field Walk-Thru Report	X	Copy	Copy
Field Logbook	X		
Chains of Custody	X	Copy	Copy
Flushing Notification/ Flushing Log Tags/Procedure	X	Copy	Copy
Field Sampling Summary Report	X	Copy	Copy
• Flush Tags	X	Copy	Copy
• Floor Diagrams	X	Copy	Copy
• Plumbing Profile	X	Copy	Copy
• Filter Inventory	X	Copy	Copy
• Drinking Water Outlet Inventory	X	Copy	Copy
• Pre Sampling Water Use Certification	X	Copy	Copy
Laboratory Data Report	X	Copy	Copy
Final Project Report	Copy	X	Copy

Appendix A
3Ts for Reducing Lead in Drinking Water in Schools:

Revised Technical Guidance, December 2005; Errata to 3Ts, October 2006

Available online at:

https://www.epa.gov/sites/production/files/2015-09/documents/toolkit_leadschools_guide_3ts_leadschools.pdf

http://www.nj.gov/dep/watersupply/dwc-lead-schools.html

Appendix B:

Pascack Valley Regional High School District
Lead Water Testing Sampling Plan
6/30/2017

PASCACK VALLEY REGIONAL HIGH SCHOOL DISTRICT

LEAD DRINKING WATER TESTING SAMPLING PLAN

6/30/2017

Version 1.0

Project Manager:
Allan Martin, District Facilities Manager

225 West Grand Avenue
Montvale, New Jersey 07645
201-358-7020 x22021

Contents

1. INTRODUCTION

This Lead Drinking Water Testing Sampling Plan (Sampling Plan) was developed by the Pascack Valley Regional High School District, (District), based on guidance developed by the New Jersey Department of Environmental Protection (NJDEP) and the United States Environmental Protection Agency (USEPA), to establish a plan for sampling lead at drinking water outlets used for consumption or food preparation in every school within the District (See Attachment A for full school listing). The data collected through the execution of this Sampling Plan will determine if immediate remedial measures are necessary and will assist in the prioritization of future water testing for lead in accordance with this Sampling Plan.

This Sampling Plan is based on the USEPA publication, "The 3Ts for Reducing Lead in Drinking Water in Schools" and NJDEP guidance.

The District has also developed a Quality Assurance Project Plan (QAPP) for the sampling program which is available under separate cover.

2. OBJECTIVE

The 1988 Lead Contamination Control Act (LCCA) is aimed at identifying and reducing lead (Pb) in drinking water in schools and child care facilities. In response, the USEPA prepared guidance documents to assist school districts in meeting the requirements of the LCCA. The guidance documents were used as a resource in developing this Sampling Plan.

It should be noted, for the purpose of determining immediate remedial measures (i.e. taking drinking water outlets out of service and notifying parents/guardians of results), the District is required to utilize the lead action level established in the SDWA rules by the USEPA at 40 CFR 141.80 for lead in drinking water. At the time of development of this Sampling Plan, the lead action level is 15 µg/L, which is more stringent than the guidance provided by USEPA in their Lead in Schools Guidance which recommends action be taken at drinking water outlets greater than 20 µg/L. Schools in New Jersey that are served by their own well (not public water), which are regulated pursuant to the Federal and New Jersey SDWA, must adhere to the 15 µg/L value for determining compliance.

3. SAMPLING PROJECT COORDINATION

Testing for lead in schools requires a coordinated effort especially when multiple schools are to be included in the testing effort. Designated personnel and set protocols are essential to ensuring a coordinated effort.

3.1 School District Program Manager (Program Manager)

Pascack Valley Regional High School District **Program Manager:**
Program Manager: P. Erik Gundersen
201-358-7004

The School District Program Manager (Program Manager) is the overall authority in the execution of the District's lead sampling project. He/she is responsible for the initial notification to the District of the testing program, obtaining funds for testing, assigning the Sampling Project Manager, requesting/enlisting the assistance from other District departments if needed, approving the District's QAPP(s), approving the Final Report for each school and coordinating with other District officials to make the results of the testing available to the public.

3.2 Sampling Project Manager (Project Manager)

Pascack Valley Regional High School District **Sampling Project Manager:**
Allan Martin
201-358-7020 ext. 22021

The Sampling Plan Project Manager (Project Manager) is responsible for overseeing the execution of lead sampling at each of the district's schools. This involves the prioritization of schools to be sampled, and adherence with the District's Sampling Plan and QAPP. He/she serves as the liaison between the District, State agencies, local Health Departments, laboratories and public water systems (if applicable). He/she reports to the Program Manager.

Project Manager Responsibilities

- Prepare the District's Specific Quality Assurance Project Plan (QAPP) and Sampling Plan;
- Manage the Sampling Plan and QAPP;
- Oversight of Individual School Project Officers (Project Officers) to ensure that they adhere to the Sampling Plan procedures and the QAPP;
- Purchase of equipment needed for district lead sampling;
- Coordinate with New Jersey laboratories certified for lead testing in drinking water;
- Coordinate with Project Officers to establish sampling schedules;
- Ensure properly signed QAPPs are in place prior to initiation of sampling;
- Verify that officials from each school are aware when sampling is scheduled and the expected duration;
- Review of the School Field Sampling Summary Reports prepared by Project Officers;
- Review of Laboratory Data Reports (LDR) from Laboratory Managers;
- Review of Final Project Reports prepared by Project Officers;
- Identify limitations in the use of any laboratory data due to information provided in the accompanying School Field Sampling Summary Report;
- Maintain the original signed QAPP(s);
- Maintain documents, reports and records listed in QAPP, including:
    - Laboratory Data Reports (LDR)
    - Copy of Field Sampling Summary Report with copies of field logbooks,
    - Field Walk-Through reports including Attachments B, C, D E and F of this Sampling Plan,
    - Chain of custody forms and flush tags.

- Copy of Final Project Report
- Maintenance of other relevant records, such as:
  - Purchase orders for analytical costs (copy).
  - Agreement with laboratory to sample, analyze, and report with details for payment
  - Receipts (originals or copies)

3.2 Individual School Sampling Project Officers (Project Officers)

An Individual School Sampling Project Officer (Project Officer) is assigned for each school. A Project Officer should be someone who is familiar with the school building layout and plumbing system. See District's QAPP for a list of the Project Officers.

Project Officer Responsibilities

- General project oversight for assigned school(s).
- Generate field log book for each assigned school. Document field activities including any changes to procedures outlined in the Sampling Plan or QAPP.
- Ensure proper completion of the Plumbing Profile Form for assigned school(s) - See Attachment B.
- Oversight of completion of the following reports found in the Sampling Plan which require sign–off by Project Officer:
  - Water Outlet Inventory (Attachment C)
  - Filter Inventory (Attachment D)
  - Flushing Log (Attachment E)
  - Pre Sampling Water Use Certification (Attachment F).
- Prepare labels for outlets to be sampled.
- Prepare for Walk-Through including acquisition of School Floor Plan.
- Attend school Walk-Through.
- Ensure proper completion of Walk-Through documentation including identification of outlets on Floor Plan, and Sampling Location Inventory with coding according to the Sampling Plan (Attachment C).
- Supervision of field activities such as Walk- Through, flushing (if required), locking school prior to sampling, and sample collection.
- Identify low use water outlets requiring flushing and attach flush tag (Attachment G).
- Ensure that Field Sampling Team has all relevant sampling supplies including sampling bottles, labels, proper reagent water and chain of custody forms prior to collection of samples.
- Ensure that all water outlets to be sampled prior to sampling event are labeled.
- Ensure that all low use outlets identified for sampling had been flushed.
- Remove flush tags from outlet once sampling is completed.
- Responsible for ensuring water remains motionless for a minimum of eight hours (last to leave the school) prior to sampling event by following procedures in Section 8.
- Verify that the Sampling Plan was followed prior to initiating sampling by completing the Pre-Sampling Water Use Certification (Attachment F).
- Provide supervision of sampling event.

- Document issues during sampling event in field log book.
- Prepare Field Walk-Through Report, School Field Sampling Summary Report and Final Project Report for assigned school(s).
- Maintain field log books for each school.
- Prepare samples for shipment and delivery to laboratory per certified laboratory instructions.
- Ensure that samples are delivered to laboratory within the time period specified by the certified laboratory

3.3 Individual School Protocols

A separate log book and supporting documentation shall be kept for each school. The contents of the log book are to include the Attachments A through F found at the end of this plan. A field log book should include but not be limited to: a material evaluation, filter log, drinking water outlet inventory, flushing log, and label identification codes.

4. SCHOOL SAMPLING PRIORITY

The District developed a list of all school facilities scheduled for sampling. See Attachment A for the school sampling listing. Please note that the list may be updated based on conditions at the school, which prevent sampling from occurring or scheduling issues. Accordingly, the list should include a revision date.

Districts may need to prioritize the sampling schedule. For those cases, development of criteria is required and the criteria needs to be included in the Sampling Plan.

(District to insert prioritization criteria if applicable:) N/A

[Example:

District Schools were prioritized based on:

- The presence of lead plumbing or infrastructure as determined in the Plumbing Profile;
- Age of the students; and
- Student population.]

5. PLUMBING SURVEY

Prior to a sampling event, documentation of various aspects of each school's water system needs to be completed. This following information needs to be compiled and the attachments completed including:

5.1 Plumbing Profile

The purpose of a Plumbing Profile (Attachment B) is to identify and categorize plumbing and infrastructure in order to prioritize schools/outlets for testing, and to identify potential sources of lead (i.e. lead service lines, or lead piping or solder). The results of the Plumbing Profile determine the sampling locations and priority within the individual school facilities.

A Plumbing Profile should include all of the following:

- Year school built and dates of any additions
- Building blue prints and floor diagrams
- Service line material;
- Material of internal plumbing, this is an important part of a plumbing profile, and whether it meets the current New Jersey "lead-free" plumbing code;
- Point-of-entry or point-of-use treatment being used;
- All drinking water outlets including fountains that are permanently out of service;
- All drinking water outlets including fountains that are temporarily out of service;
- All drinking water outlets including drinking water fountains that are leaking or evidence of staining and in need of repair;
- Type (make and model) and location of all drinking water fountains, including detailed description that identifies of whether they are lead-lined or if they have been involved in any recalls, (See USEPA Fact Sheet at http://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=30005UPU.txt);
- Locations of all drinking water outlets including fountains;
- All plumbing repairs and replacements needed for internal plumbing;
- All plumbing repairs and replacements conducted within the past year;
- Locations of any electrical wires grounded to water pipes

5.2 Filter Inventory (If Applicable)

A Filter Inventory (Attachment D) shall be prepared, including the following information:

- Location (school and outlet);
- Make and model;
- Installation date (last replaced);
- Replacement frequency;
- Documentation of repairs; and
- Contaminants the filter is capable of and/or NSF-certified for the removing e.g. lead and others

6. PLANNING

6.1 Walk –Through

A Walk-Through must be conducted by the Project Officer prior to sampling as part of the planning process. The Walk-Through must include every room (including but not limited to classrooms, offices, bathrooms, kitchens and recreational areas) in the facility. During the Walk-Through, all drinking water and food preparation outlets to be sampled will be labelled by the Project Officer on the Floor Diagram (6.2).

The Project Officer will also conduct an onsite assessment of each sample outlet to document (using Attachment C) specific characteristics of the outlet (e.g. leaking outlets; staining). During this assessment, the water should be turned on to determine the spray pattern, whether there is adequate flow to collect samples or if any odor or color differences are present and whether the cold water faucet is functioning properly. Only cold water faucets are to be sampled. For motion

sensor and metered sinks, the hot water valve will be shut off on the day of sampling. All outlets in need of repair must be repaired prior to sampling or documented on the temporary out of service list in the Plumbing Profile (Attachment B).

6.2 Floor Diagram

Each drinking water outlet shall be identified on the school schematic (floor diagram). The floor diagram should have the classroom numbers and the following locations labeled:

- Service Line = SL
- Point of Entry[1]
- Food preparation outlets (i.e. cafeteria, kitchen and home economics class faucets);
- Drinking Water Fountains; and
- Other drinking water outlets to be sampled (i.e. nurse's office, teacher's lounge, home economics, etc.), and any other room or outside facility used for water consumption.

The Project Officer must date and sign the floor diagram.

7. SAMPLE LOCATIONS

7.1 Sample Locations

The following locations shall be identified and labeled for each school:

- Kitchen outlets
- Food Preparation outlets
- Teacher Lounge outlets
- Nurse's Office outlets
- Home Economic Sink outlets
- Drinking Water Fountains – Bubblers and Water Coolers
- Outside drinking water fountains and food preparation areas
- Ice Machines
- Other drinking water outlets used for consumption

Examples of outlets that do not need to be sampled include utility sinks, outside spigots, bathroom sinks and classroom sinks, unless any of these sinks are used routinely for consumption.

7.2 Sample Location Codes

Each sampling location shall be identified by its location and type using the following coding system (Note additional codes as needed):

KC = Kitchen Outlet, Cold
CT= Cafeteria Outlet
FP= Food Preparation Sink

[1]Point of entry is the closest water outlet to the entrance of the service line into the school.

TL= Teacher Lounge Sink
NS = Nurse's Office Sink
EC = Home Economics Outlet, Cold
DW= Drinking Water Bubbler
WC = Water Cooler (Chiller Unit)
IM = Ice Machine

7.3 Sampling Location Inventory

Attachment C shall be used to develop a detailed inventory of each drinking water outlet in the school to be sampled. The inventory must be completed and signed by the Project Officer.

The Drinking Water Outlet Inventory shall include the following information:

- All drinking water outlets in the school
- The type, location, and sample location code of each drinking water outlet
- If the drinking water outlet has a chiller unit
- If the drinking water outlet has an aerator/screen
- If the drinking water outlet is motion activated, in which the hot water at the outlet must be turned off prior to sampling
- If the drinking water outlet is operational
- If the drinking water outlet has not been used frequently
- If the drinking water outlet is leaking
- If the drinking water outlet has a filter
- The make and model of all drinking water fountains and water coolers

8. SAMPLING PROCEDURES

8.1 Timeline

Samples should be collected before the facility opens in the morning and before any water is used in the building. The water shall sit in the pipes unused for at least 8 hours, but no more than 48 hours, before a sample is collected.

At no time should filters, aerators and screens be removed prior to or during the sampling event.

Prior to Sampling

- For buildings that have not been used for more than 48 hours, the District will perform systematic flushing 48 hours prior to the sampling event, as described in the USEPA's "3Ts For Reducing Lead in Drinking Water in Schools" (revised October 2006, see page 56). This flushing event and locations shall be documented in a log (Attachment E).
  - The flushing log must be completed and signed by the Project Officer.
- The Project Officer will contact the laboratory to confirm sample bottles, weatherproof labels, chain of custody forms and coolers are available and ready for the sampling event.
- Every drinking water outlet to be sampled (previously identified in Attachment C) will be labeled with a specific Sample Location Code in indelible marker on the underside of the sampling fixture in the event the District has to re-visit the sample location.

- A communication will be sent out to all staff in schools being sampled explaining what time all staff must exit the building.
- After this time, signs shall be posted to indicate that water should not be used and access to the building shall be restricted to ensure that water sits undisturbed for a minimum of 8 hours.
- Turn off all irrigation and outdoor water features.

Day of Sampling

The Project Officer will use Attachment F to document when the water was last used and when sampling began.

8.2 Sample Collection

Sample Collection Highlights

- All samples shall be collected in a pre-cleaned HDPE 250mL wide mouth single use rigid sample container.
- Identify on the Sampling Plan the outlet closest to the water service line(s) entry point to be collected first, then identify the next closest outlet as second, and move away from the water service line(s) entry point until the outlet farthest away is identified to be sampled last on the sampling plan. This will minimize the chance that a sampling location will be flushed by an upstream fixture. Sampling will begin at the outlet closest to the point of entry and continue to the furthest outlet to ensure the water remains motionless in the plumbing.

Sample Collection Method

USEPA recommends a two-step sampling process be followed for identifying lead contamination. Lead in a water sample taken from an outlet can originate from the outlet fixture (the faucet, bubbler etc.), plumbing upstream of the outlet fixture (pipe, joints, valves, fittings etc.), or it can already be in the water that is entering the facility. The two-step sampling process helps to identify the actual source(s) of lead.

In Step 1, initial samples are collected to identify the location of outlets providing water with elevated lead levels and to learn the level of the lead in the water entering the facility (i.e., at the service connection). In Step 2, follow-up flush samples are taken only from outlets identified as problem locations to determine the lead level of water that has been stagnant in upstream plumbing, but not in the outlet fixture. Sample results are then compared to determine the sources of lead contamination and to determine appropriate corrective measures.

Schools may wish to collect both initial and follow-up samples at the same time. This is more convenient and may save time and money; however, using this approach creates a trade-off between convenience and confidence. The confidence in the sample results will decrease since flushing water through an outlet immediately after taking the initial sample could compromise the flushed locations depending on the interior plumbing of buildings. Protocols for both options are provided below. School districts can decide which option works best for their situation.

All sampling must be conducted in accordance with this Sampling Plan and the District's QAPP.

The Pascack Valley Regional High School District will utilize the "First Draw and Follow-up Flush Sampling Conducted on Different Days" sampling method. The process is outlined below:

1. For each drinking water outlet sampled, a new pair of non-colored latex or nitrile gloves shall be used. This is to minimize the potential for cross contamination of sample outlets by sampling personnel.
2. First draw samples (i.e. samples collected from outlets where water sat undisturbed for a minimum of 8 hours) will be collected from a cold water outlet at each location identified in 7.3 above. The sample must be collected by placing the bottle under the drinking water outlet before turning the cold water outlet on. No water should be allowed to run prior to collecting a sample. For motion-activated faucets, the hot water valve must be turned off prior to sampling.
3. Each sample collected will be properly identified on the sample bottle and chain of custody using the Sample Location Code previously identified by the District (as identified on the label on the outlet and on the floor diagram).
4. Upon receiving the testing results, the District will conduct a second sample event collecting a follow-up flush sample at any drinking water outlet with an initial result of greater than 15 µg/L (as defined as greater than or equal to 15.5 µg/L).
5. The following planning will take place prior to the follow-up sampling event:
    a. The drinking water outlets requiring a flushed sample shall be listed on a Follow-Up Sampling form (See Attachment H.vii for example), labelled with an indelible marker, and identified on the floor diagram.
    b. Procedure for ensuring the water remains stagnant for a minimum of 8 hours shall be followed.
6. The drinking water outlet will be turned on and allowed to run for 30 seconds then the water will be captured in a pre-cleaned 250 mL container. Note: If the drinking water outlet is a water cooler with a cooler unit then allow the water to run for 15 minutes prior to collecting a flushed sample in a pre-cleaned 250 mL container.
1. Each sample collected will be properly identified on the sample bottle and chain of custody using the Sample Location Code previously identified by the District (as identified on the label on the outlet and on the floor diagram). Additionally, the follow-Up flush samples will be identified by noting "FLUSH" after the Sample Location Code

on the sample bottle and on the chain of custody (e.g. MM-2F-DW-01 and MM-2F-DW-01 FLUSH).

Additional Sampling Event

Upon receiving the results of the initial and follow-up flush samples at all outlets, the District will conduct additional sampling events for the following situations: any location required to be sampled previously but was not sampled (not operational during initial sampling event), where there was a possible lab error or sample collection error, and any location that was not sampled but could help pinpoint the source of lead in a sampled outlet.

8.3 New Jersey Certified Laboratories

Laboratory Responsibilities

Certify to the District that they have received, and will follow, the Sampling Plan and QAPP.

- Each laboratory must document that laboratory personnel have previous experience sampling for lead and have been properly trained to conduct USEPA Method 200.8 or other methods that are approved sampling methods. Approved sampling methods are USEPA methods for the analysis of lead in drinking water (USEPA Method 200.9, USEPA Method 200.5, SM3113B, ASTM3559-D) provided that the reporting limit used by the laboratory for that method is less than or equal to 2 µg/L.

- The laboratory will conduct analysis of a laboratory fortified blank (Field Blank) to assess the accuracy. The acceptance criteria for accuracy for the results will be within plus or minus 15% recovery of the known value.

- Laboratories must provide the results to the District within timeframe required under contract (14 day is average).

- Laboratories will report in µg/L (ppb) and to at least three significant figures.

Sampling Personnel Responsibilities

Each sampler will be responsible for the following:

- Preparation of pre-printed waterproof labels, which will include, the sampler's name, the school name, the Sample Location Code, parameter to be analyzed (lead), date of collection and any preservation technique used;
- Preparation of a chain of custody to include the field sample information;

- Obtaining from the laboratory, prior to the sampling event, ASTM Type I reagent-grade water (RGW) to be used as Field Reagent Blanks (FRB). The sampler will transport this RGW to the school to be sampled. Before the first sample is collected the RGW collected at the Laboratory will be transferred to a sample container near the first sample location inside the school building. This FRB sample will be stored and transported in the same cooler, handled and preserved in the same manner as samples collected at that school.
- Documentation of any and all observations such as automatic sensors, odors, change in water color, low water flow, water outlet leaks (i.e. 1 second drip), irregular water spray, attached filter(s), if the screen/aerator is on/off the water outlet or if the water becomes warm/hot.
- Minimizing the potential for cross contamination of sample outlets by sampling personnel. The water will be collected from the outlet directly into each container.
- Following all of the sampling procedures outlined in the Sampling Plan and QAPP.

8.4 Sampling Results

The laboratories will provide the lead sample results to the District in electronic format within the timeframe required under the contract. A spreadsheet of all results, the analytical results report, and the chain of custody forms must be included.

Within 24 hours after the District has reviewed and verified the final laboratory results, the District will make the results publically available and if any results exceed the action level provide written notification to the parents/guardians of all students as well as to the Department of Education.

8.5 Intermediate Remedial Measures

Upon receiving sample results, the District will turn off all outlets with results that exceed 15 µg/L (as defined as greater than or equal to 15.5 µg/L). If these locations must remain on for non-drinking purposes, a "DO NOT DRINK – SAFE FOR HANDWASHING ONLY" sign will be posted (Attachment H.v).

Glossary

Drinking Water Outlet- an outlet that can be used for the consumption of water, such as, water fountains, water coolers, bubblers, kitchen sinks and food preparation sinks; however, classroom, bathroom, and outlets used for washing dishes are not drinking water outlets.

Action Level (AL)- The lead level established by the USEPA at 40 CFR 141.80 for lead in drinking water.

Bottled Water- includes sealed purchased water from an external company (individual bottles or dispensers). Drinking water dispensers that utilize purchased water are not required to be sampled.

First Draw Sample – a sample that is collected from outlets where water sat undisturbed for a minimum of 8 hours.

Follow-up Flush Sample - sample that is collected from outlets after they have been manually flushed.

Low-Use Outlets- outlets that are not used routinely and may sit for periods of time with minimal or no use. Examples include those outlets in a wing of a school that is temporarily closed off and are not being used, or fountains and food preparation outlets that are only used during sporting or other events.

Out of Service Outlets- drinking water outlets as identified on Attachment C that are not operational.

a. **Permanently Out of Service Outlets-** outlets that are not being used and the District plans to decommission.

b. **Temporarily Out of Service Outlets-** outlets that require repair or replacement and will be put back in service once they are repaired. For example, an outlet with a broken handle.

Point of entry (POE)- The point at which the service line enters the building. For the purposes of sample collection, the POE sample location is the closest water outlet to the entrance of the service line into the school.

Quality Assurance Project Plan (QAPP) Template- describes the planning, implementation, and evaluation steps that will be consistently applied by those involved

in a School District's Sampling Plan. The QAPP will provide a high level of confidence in the results of this sampling and aide in meeting the overall goal of ensuring any appropriate remediation measures are quickly identified and implemented.

Sampler- personnel responsible for collecting the drinking water outlet samples for a school. The individual is required to review and understand their roles and responsibilities under the District's Quality Assurance Program Plan and be able to collect samples in accordance with the District's Sampling Plan.

Service Line- the pipe that carries water to the school from the public water system's main in the street.

School Wide Systematic Flush- system flushing is required if the school has been dormant for greater than 48 hours (holiday or seasonal break). A Flushing Log (Attachment E) needs to be completed for each school flushed.

Water Cooler- any mechanical device affixed to drinking water supply plumbing that actively cools water for human consumption. The reservoir can consist of a small tank or a pipe coil.

Attachment A - List of Pascack Valley Regional High School District Schools Priority for Sampling

SCHOOL NAME	DATE OF SAMPLING	CERTIFIED LABORATORY	NOTES
Add rows as needed			
Pascack Hills High School	6/16/2017	IATL International Asbestos Testing Laboratories	
Pascack Valley High School	6/16/2017	IATL International Asbestos Testing Laboratories	

Attachment B – Plumbing Profile

***Note**: Complete for each school. For additional information see the USEPA publication, "The 3Ts for Reducing Lead in Drinking Water in Schools"*

Name of School:_Pascack Hills High School_____ Grade Levels: _9-12 + Pre-K___
Address: _225 West Grand Avenue, Montvale, NJ 07645_____
Individual school project officer Signature: _____ Date: 6/30/17

Questions	Answers	
Background Information		
1. What year was the original building constructed? Were any buildings or additions added to the original facility?	The original building was constructed in 1964. There were additions to the facility in 1965, 2004, 2005, and 2006.	
2. If the building was constructed or repaired after 1986, was lead-free plumbing and solder utilized? What type of solder was used? Document all locations where lead solder was used.	Unknown but we assume lead solder was used since all of our piping is copper	
3. Where are the most recent plumbing repairs and replacements?	Location: 1. Bathrooms 2. Fountains 3. Flushometers 4. Kitchens	Description: 1. Sink faucet replacement 2. Replaced 3. Various bathrooms 4. Faucet replacements
4. With what materials is the service connection (the pipe that carries water to the school from the public water system's main in the street) made? Where is the Service Line located? (This is the POE location.)	Material: Cast Iron Location: Front of building and enters through A/V room on second floor	

Questions	Answers	
5. Is there point of entry (POE) or point of use (POU) treatment in use?	Y / N: No Type:	Location:
6. Are there tanks in your plumbing system (pressure tanks, gravity storage tanks)?	Y / N: No	
7. Does the school have a filter maintenance and operation program? If so, who is responsible for this program? What is the process for adding filters?	We have just started a filter maintenance program. Responsible: Maintenance Department Process: as needed	
8. Have accessible screens or aerators on outlets that provide drinking water been cleaned? Does the school have a screen or aerator maintenance program?	Y / N: Yes Cleaned as needed	
9. Have there been any complaints about bad (metallic) taste? Note location(s).	Y / N: No Location:	
10. Review records and consult with the public water supplier to determine whether any water samples have been taken in the building for any contaminants. If so, identify: • Name of contaminant(s) • Concentrations found • pH level Is testing done regularly at the building?		

Questions	Answers	
11. Other plumbing background questions include: • Are blueprints of the building available? • Are there known plumbing "dead-ends", low use areas, existing leaks or other "problem areas"? Are renovations planned for any of the plumbing system?	Yes, blueprints are avaible. No problem areas No plans at this time	
Walk-Through *These questions should be addressed during the walk-through of the facility, while Attachment C- Drinking Water Outlet Inventory is being completed.*		
1. Confirm the material of Service Line visually.	Cast iron	
2. Confirm the presence of POE or POU treatment.	No	
3. What are the potable water pipes made of in your facility? • Lead • Plastic • Galvanized Metal • Cast Iron • Copper • Other Note the water flow through the building and the areas that receive water first, and which areas receive water last.	Copper	
4. Are electrical wires grounded to Water Pipes? Note location(s).	Y / N: No Location:	
5. Are brass fittings, faucets, or valves used in your drinking water system? Note that most faucets are brass on the inside. Document the locations of any brass water outlet to be sampled.	Complete in "Brass" Column in Attachment C- Water Outlet Inventory.	

Questions	Answers	
6. Locate all drinking water outlets (i.e. water coolers, bubblers, ice machines, kitchen/ food prep sinks, etc.) in the facility.	Complete in Attachment C-Water Outlet Inventory.	
7. Have the brands and models of the water coolers in the school been compared to the list of recalled water coolers in the Toolkit? Recalled Drinking Water Fountains Make and Model	Y / N: Yes No recalled drinking fountains Type	
8. Have signs of corrosion, such as frequent leaks, rust-colored water, or stained fixtures, dishes, or laundry been detected? Note the locations of water outlets.	Complete in "Signs of Corrosion" column in Attachment C- Drinking Water Outlet Inventory. No	
9. Are there any outlets that are not operational and therefore out of service? Permanently? Temporarily? Permanently Temporarily	Y / N: Yes Complete "Operational Column" in Attachment C-Drinking Water Outlet Inventory. Type/ Location	Description

Attachment B – Plumbing Profile

***Note**: Complete for each school. For additional information see the USEPA publication, "The 3Ts for Reducing Lead in Drinking Water in Schools"*

Name of School:_Pascack Valley High School_____ Grade Levels: _9-12 + Pre-K_____
Address: _200 Piermont Avenue, Hillsdale, NJ 07642
Individual school project officer Signature: _____ Date: 6/30/17

Questions	Answers	
Background Information		
1. What year was the original building constructed? Were any buildings or additions added to the original facility?	1954 Yes, additions were added in 2004, 2005	
2. If the building was constructed or repaired after 1986, was lead-free plumbing and solder utilized? What type of solder was used? Document all locations where lead solder was used.	Unknown but we assume lead solder was used since all of our piping is copper	
3. Where are the most recent plumbing repairs and replacements?	Location: 1. Bathrooms 2. Fountains 3. Flushometers 4. Kitchen	Description: 1. Sink and faucet replacement 2. Fountain replacement 3. Various bathrooms 4. Faucet replacements
4. With what materials is the service connection (the pipe that carries water to the school from the public water system's main in the street) made? Where is the Service Line located? (This is the POE location.)	Material: cast iron Location: Boiler Room front of school	

Questions	Answers	
5. Is there point of entry (POE) or point of use (POU) treatment in use?	Y / N: No Type:	Location:
6. Are there tanks in your plumbing system (pressure tanks, gravity storage tanks)?	Y / N: No	
7. Does the school have a filter maintenance and operation program? If so, who is responsible for this program? What is the process for adding filters?	Recently, we have started a filer maintenance program. Responsible: Maintenance Department As needed	
8. Have accessible screens or aerators on outlets that provide drinking water been cleaned? Does the school have a screen or aerator maintenance program?	Y / N: Yes Clean as needed	
9. Have there been any complaints about bad (metallic) taste? Note location(s).	Y / N: No Location:	
10. Review records and consult with the public water supplier to determine whether any water samples have been taken in the building for any contaminants. If so, identify: • Name of contaminant(s) • Concentrations found • pH level Is testing done regularly at the building?		

Questions	Answers	
11. Other plumbing background questions include: • Are blueprints of the building available? • Are there known plumbing "dead-ends", low use areas, existing leaks or other "problem areas"? Are renovations planned for any of the plumbing system?	Yes, blueprints are available No problem areas No plans at this time	
Walk-Through *These questions should be addressed during the walk-through of the facility, while Attachment C- Drinking Water Outlet Inventory is being completed.*		
1. Confirm the material of Service Line visually.	Cast iron - water-provider verified	
2. Confirm the presence of POE or POU treatment.	No	
3. What are the potable water pipes made of in your facility? • Lead • Plastic • Galvanized Metal • Cast Iron • Copper • Other Note the water flow through the building and the areas that receive water first, and which areas receive water last.	Copper	
4. Are electrical wires grounded to Water Pipes? Note location(s).	Y / N: No Location:	
5. Are brass fittings, faucets, or valves used in your drinking water system? Note that most faucets are brass on the inside. Document the locations of any brass water outlet to be sampled.	Complete in "Brass" Column in Attachment C- Water Outlet Inventory.	

Questions	Answers	
6. Locate all drinking water outlets (i.e. water coolers, bubblers, ice machines, kitchen/ food prep sinks, etc.) in the facility.	Complete in Attachment C-Water Outlet Inventory.	
7. Have the brands and models of the water coolers in the school been compared to the list of recalled water coolers in the Toolkit? Recalled Drinking Water Fountains Make and Model	Y / N: Yes No recalled fountains Type	
8. Have signs of corrosion, such as frequent leaks, rust-colored water, or stained fixtures, dishes, or laundry been detected? Note the locations of water outlets.	Complete in "Signs of Corrosion" column in Attachment C- Drinking Water Outlet Inventory. No	
9. Are there any outlets that are not operational and therefore out of service? Permanently? Temporarily? Permanently Temporarily	Y / N: No Complete "Operational Column" in Attachment C-Drinking Water Outlet Inventory. Type/ Location	Description

Attachment C – Drinking Water Outlet Inventory

(Complete for each school)

Name of School: _Pascack Hills High School ___ Address: __225 West Grand Avenue, Montvale, NJ 07645___

Grade Levels: 9-12, Pre-K_____ Year School Constructed: 1964_____ Renovated/Additions: 1965, 2004, 2005, 2006

Individual school project officer Name/Signature: __Alex Toth_____ Date Completed: __6/7/17_____

#[2]	Type	Location	Code	Operational[3] (Y/N)	Signs of Corrosion[4] (Y/N)	Filter[5] (Y/N)	Brass Fittings, Faucets or valves? (Y/N)	Aerator/ Screen (Y/N)	Motion Activated (Y/N)	Chiller (Y/N)	Water Cooler		Comments
											Make	Model	
A	WATER COOLER	GYM LOBBY	A-PH-1-GE-CW	Y	N	Y	N	N	Y	Y	ELKAY	ENLZS8 WS 1F	INSTALL 4/2017
B	FOUNTAIN	GIRLS LOCKER ROOM	B-PH-1-LR-B	Y	N	N	Y	N	N	N			BUBBLER
C	WATER COOLER	NEW GYM HALLWAY	C-PH-1-NG-CW	Y	N	N	N	N	Y	Y	ELKAY	EZFS8 1B	
D	ICE MACHINE	ATHLETIC TRAINERS	D-PH-1-IM	Y	N	Y	N	N	N	Y			

[2] Number outlets starting at the closest outlet to the Point of Entry (POE).
[3] Document if permanently or temporarily out of service on the Attachment B- Plumbing Profile.
[4] Signs of corrosion detected, such as but not limited to frequent leaks, rust-colored water, or stained fixtures, dishes, or laundry.
[5] Document on Attachment D- Filter Inventory.

#	Type	Location	Code	Operational[6] (Y/N)	Signs of Corrosion[7] (Y/N)	Filter[8] (Y/N)	Brass Fittings, Faucets or valves? (Y/N)	Aerator/ Screen (Y/N)	Motion Activated (Y/N)	Chiller (Y/N)	Water Cooler		Comments
E	FACUET	ATHLETIC TRAINERS	E-PH-1-F	Y	N	N	Y	N	N	N			
F	WATER COOLER	TRAINERS HALLWAY	F-PH-1-171-CW	Y	N	N	N	N	N	Y	ELKAY	EZFS81B	NON BOTTLE FILL
G	FOUNTAIN	D WING HALLWAY	G-PH-1-144-B	N	N	N	Y	N	N	N			BUBBLER
H	FOUNTAIN	D WING HALLWAY	H-PH-2-248-B	N	N	N	Y	N	N	N			BUBBLER
I	FOUNTAIN	D WING HALLWAY	I-PH-2-255-B	Y	N	N	Y	N	N	N			BUBBLER
J	FOUNTAIN	C WING HALLWAY	J-PH-1-127-B	Y	N	N	Y	N	N	N			BUBBLER
K	WATER COOLER	C WING HALLWAY	K-PH-2-227-CW	Y	N	Y	N	N	Y	Y	ELKAY	ENLZS8WS 1F	INSTALL 4/2017
L	FOUNTAIN	C WING HALLWAY	L-PH-2-235-B	Y	N	N	Y	N	N	N			BUBBLER

[1] Number outlets starting at the closest outlet to the Point of Entry (POE).
[2] Document if permanently or temporarily out of service on the Attachment B- Plumbing Profile.
[3] Signs of corrosion detected, such as but not limited to frequent leaks, rust-colored water, or stained fixtures, dishes, or laundry.
[4] Document on Attachment D- Filter Inventory.

#	Type	Location	Code	Operational[9] (Y/N)	Signs of Corrosion[10] (Y/N)	Filter[11] (Y/N)	Brass Fittings, Faucets or valves? (Y/N)	Aerator/ Screen (Y/N)	Motion Activated (Y/N)	Chiller (Y/N)	Water Cooler		Comments
M	WATER COOLER	B WING HALLWAY	M-PH-1-101-CW	Y	N	Y	N	N	Y	Y	ELKAY	ENLZS8 WS 1F	INSTALL 4/2017
N	FACUET	NURSE	N-PH-1-NUR-F	Y	N	N	N	Y	N	N			
O	FOUNTAIN	A WING HALLWAY	O-PH-2-203-B	Y	N	N	N	N	Y	Y			
P	WATER COOLER	A WING HALLWAY	P-PH-1-110-CW	Y	N	Y	N	N	Y	Y	ELKAY	ENLZS8 WS 1F	
Q	WATER COOLER	A WING HALLWAY	P-PH-2-213-CW	Y	N	Y	N	N	Y	Y	ELKAY	ENLZS8 WS 1F	
R	FACUET	KITCHEN	R-PH-K-FP1	Y	N	N	Y	N	N	N			
S	FACUET	KITCHEN	S-PH-K-F1	Y	N	N	Y	Y	N	N			INSTALL 4/2017
T	FACUET	KITCHEN	T-PH-K-F2	Y	N	N	Y	N	N	N			INSTALL 4/2017
U	FACUET	KITCHEN	U-PH-K-F3	Y	N	N	Y	Y	N	N			

[1] Number outlets starting at the closest outlet to the Point of Entry (POE).
[2] Document if permanently or temporarily out of service on the Attachment B- Plumbing Profile.
[3] Signs of corrosion detected, such as but not limited to frequent leaks, rust-colored water, or stained fixtures, dishes, or laundry.
[4] Document on Attachment D- Filter Inventory.

#	Type	Location	Code	Operational[12] (Y/N)	Signs of Corrosion[13] (Y/N)	Filter[14] (Y/N)	Brass Fittings, Faucets or valves? (Y/N)	Aerator/ Screen (Y/N)	Motion Activated (Y/N)	Chiller (Y/N)	Water Cooler		Comments
V	FACUET	KITCHEN	V-PH-K-F4	Y	N	N	Y	N	N	N			INSTALL 4/2017
W	FACUET	KITCHEN	W-PH-K-FP2	Y	N	N	Y	Y	N	N			INSTALL 10/2016
X	ICE MACHINE	KITCHEN	X-PH-K-IM	Y	N	Y	N	N	N	Y			
Y	FACUET	KITCHEN	Y-PH-K-F5	Y	N	N	Y	N	N	N			
Z	WATER COOLER	CAFÉ	Z-PH-C-CW	Y	N	N	Y	N	Y	Y	HALSEY	HAC8FSQ 1E	
AA	FACUET	KITCHEN	AA-PH-K-F6	Y	N	N	Y	N	N	N			

[13] Number outlets starting at the closest outlet to the Point of Entry (POE).
[13] Document if permanently or temporarily out of service on the Attachment B- Plumbing Profile.
[13] Signs of corrosion detected, such as but not limited to frequent leaks, rust-colored water, or stained fixtures, dishes, or laundry.
[13] Document on Attachment D- Filter Inventory.

Attachment C – Drinking Water Outlet Inventory

(Complete for each school)

Name of School: _Pascack Valley High School Address: __200 Piermont Avenue, Hillsdale, NJ 07642__

Grade Levels: 9-12, Pre-K__ Year School Constructed: 1954___ Renovated/Additions: __2004, 2005_____

Individual school project officer Name/Signature: _Alex Toth/_____ Date Completed: __6/5/17_____

#[15]	Type	Location	Code	Operational [16] (Y/N)	Signs of Corrosion [17] (Y/N)	Filter [18] (Y/N)	Brass Fittings, Faucets or valves? (Y/N)	Aerator/ Screen (Y/N)	Motion Activated (Y/N)	Chiller (Y/N)	Water Cooler		Comments
											Make	Model	
A	COOLER	MAIN ENT	A-PV-1-ME-CW	Y	N	Y	N	N	Y	Y	ELKAY	ENLZS8 WS 1F	INSTALL 3/2017
B	COOLER	2ND FLOOR ELEVATOR	B-PV-2-229-CW	Y	N	Y	N	N	Y	Y	ELKAY	ENLZS8 WS 1F	INSTALL 3/2017
C	BUBBLER	PRE K ROOM	C-PV-1-162-B	Y	N	N	N	N	N	N			
D	COOLER	NEAR BAND	D-PV-1-165-CW	Y	N	Y	N	N	Y	Y	ELKAY	ENLZS8 WS 1F	INSTALL 3/2017
E	COOLER	NEAR NURSE	E-PV-1-151-CW	Y	N	N	N	N	Y	Y	ELKAY		
F	COOLER	MEDIA HALLWAY	F-PV-1-144-CW	Y	N	N	Y	N	N	Y	ELKAY	WTB-8-1B	

[15] Number outlets starting at the closest outlet to the Point of Entry (POE).
[16] Document if permanently or temporarily out of service on the Attachment B- Plumbing Profile.
[17] Signs of corrosion detected, such as but not limited to frequent leaks, rust-colored water, or stained fixtures, dishes, or laundry.
[18] Document on Attachment D- Filter Inventory.

#[19]	Type	Location	Code	Operational[20] (Y/N)	Signs of Corrosion[21] (Y/N)	Filter[22] (Y/N)	Brass Fittings, Faucets or valves? (Y/N)	Aerator/ Screen (Y/N)	Motion Activated (Y/N)	Chiller (Y/N)	Water Cooler		Comments
G	COOLER	NEAR 213	G-PV-2-213-CW	Y	N	Y	N	N	Y	Y	ELKAY	EZS8W SNF 1B	
H	COOLER	NEAR 114	H-PV-1-114-CW	N	N	Y	N	N	Y	Y	ELKAY	ENLZS8 WS 1F	NOT INSTALLED
I	ICE MACHINE	IN 177	I-PV-1-177-IM	Y	N	Y	Y	N	N	Y			
J	FACUET	IN 177	J-PV-1-177-F	Y	N	N	Y	N	N	N			
K	COOLER	NEAR 179	K-PV-1-179-CW	Y	N	Y	N	N	Y	Y	ELKAY		
L	COOLER	NEAR BOYS LR	L-PV-1-BLR-CW	Y	N	N	N	N	Y	Y	ELKAY		
M	COOLER	NEAR 183	M-PV-1-183R-CW	Y	N	N	N	N	N	Y	ELKAY		
N	COOLER	NEAR 183	N-PV-1-183L-CW	Y	N	N	N	N	N	Y	ELKAY		
0	COOLER	MEDIA CENTER	O-PV-1-141-CW	Y	N	N	N	N	N	Y	ELKAY	EZFS8 1B	
P	COOLER	NEAR 128	P-PV-1-128-CW	Y	N	N	N	N	Y	Y	ELKAY	EZFSTL 8 1B	

[19] Number outlets starting at the closest outlet to the Point of Entry (POE).
[20] Document if permanently or temporarily out of service on the Attachment B- Plumbing Profile.
[21] Signs of corrosion detected, such as but not limited to frequent leaks, rust-colored water, or stained fixtures, dishes, or laundry.
[22] Document on Attachment D- Filter Inventory.

#[23]	Type	Location	Code	Operational[24] (Y/N)	Signs of Corrosion[25] (Y/N)	Filter[26] (Y/N)	Brass Fittings, Faucets or valves? (Y/N)	Aerator/ Screen (Y/N)	Motion Activated (Y/N)	Chiller (Y/N)	Water Cooler		Comments
Q	ICE MACHINE	KITCHEN	Q-PV-1-K-IM	Y	N	Y	Y	N	N	Y			
R	FACUET	KITCHEN	R-PV-1-K-KC	Y	N	N	Y	N	N	N			
S	FACUET	KITCHEN	S-PV-1-K-KC	Y	N	N	Y	N	N	N			
T	COOLER	CAFÉ	T-PV-1-C-CW	Y	N	N	Y	N	N	Y	ELKAY	WTB1A	
U	FACUET	KITCHEN	U-PV-1-K-FP	Y	N	N	Y	N	N	N			
V	FACUET	KITCHEN	V-PV-1-K-FP	Y	N	N	Y	N	N	N			
W	FACUET	KITCHEN	W-PV-1-K-KC	Y	N	N	Y	N	N	N			
X	FACUET	KITCHEN	X-PV-1-K-KC	Y	N	N	Y	N	N	N			
Y	FACUET	KITCHEN	Y-PV-1-K-FP	Y	N	N	Y	N	N	N			
Z	COFFE MACHINE	KITCHEN	Z-PV-1-K-CM	Y	N	Y	Y	N	N	N			

[23] Number outlets starting at the closest outlet to the Point of Entry (POE).
[24] Document if permanently or temporarily out of service on the Attachment B- Plumbing Profile.
[25] Signs of corrosion detected, such as but not limited to frequent leaks, rust-colored water, or stained fixtures, dishes, or laundry.
[26] Document on Attachment D- Filter Inventory.

#[27]	Type	Location	Code	Operational[28] (Y/N)	Signs of Corrosion[29] (Y/N)	Filter[30] (Y/N)	Brass Fittings, Faucets or valves? (Y/N)	Aerator/ Screen (Y/N)	Motion Activated (Y/N)	Chiller (Y/N)	Water Cooler		Comments
AA	FACUET	KITCHEN	AA-PV-1-K-FP	Y	N	N	Y	Y	N	N			
BB	FACUET	KITCHEN	BB-PV-1-K-FP	Y	N	N	Y	Y	N	N			
CC	FACUET	KITCHEN	CC-PV-1-K-FP	Y	N	N	Y	Y	N	N			
DD	FACUET	WELNESS CENTER	DD-PV-1-WC-F	Y	N	N	Y	Y	N	N			

[27] Number outlets starting at the closest outlet to the Point of Entry (POE).
[28] Document if permanently or temporarily out of service on the Attachment B- Plumbing Profile.
[29] Signs of corrosion detected, such as but not limited to frequent leaks, rust-colored water, or stained fixtures, dishes, or laundry.
[30] Document on Attachment D- Filter Inventory.

Attachment D - Filter Inventory
(Complete for each school as applicable)

Name of School: _Pascack Hills High School___ Grade Levels: 9-12, Pre-K_____

Address: _225 West Grand Avenue, Montvale, NJ 07645

Individual School Project Officer Signature: _Alex Toth_____Date: 6/30/17

Sample Location / Code	Brand	Type (Make & Model)	Date Installed or Replaced	Replacement Frequency	NSF Certified for Lead Reduction Y/N
A-PH-1-GE-CW	ELKAY	51300C	5/15/17	AS NEED	Y
D-PH-1-IM	AQUA	AP517	6/3/17	ANNUAL	N
K-PH-2-227-CW	ELKAY	51300C	5/16/17	AS NEED	Y
M-PH-1-101-CW	ELKAY	51300C	5/16/17	AS NEED	Y
P-PH-1-110-CW	ELKAY	51300C	5/15/17	AS NEED	Y
Q-PH-2-213-CW	ELKAY	51300C	5/16/17	AS NEED	Y
X-PH-K-IM	AQUA	AP517	6/3/17	ANNUAL	N

Attachment D - Filter Inventory
(Complete for each school as applicable)

Name of School: Pascack Valley High School_____ Grade Levels: 9-12, Pre-K__

Address: _200 Piermont Avenue, Hillsdale, NJ 07642

Individual School Project Officer Signature: _Alex Toth/_____Date: 6/30/17

Sample Location / Code	Brand	Type (Make & Model)	Date Installed or Replaced	Replacement Frequency	NSF Certified for Lead Reduction Y/N
A-PV-1-ME-CW	ELKAY	51300C	4/2017	AS NEED	Y
B-PV-2-229-CW	ELKAY	51300C	4/2017	AS NEED	Y
D-PV-1-165-CW	ELKAY	51300C	4/2017	AS NEED	Y
G-PV-2-213-CW	ELKAY	51300C	4/2017	AS NEED	Y
H-PV-1-114-CW	ELKAY	51300C	4/2017	AS NEED	Y
I-PV-1-177-IM	GE			YEARLY	N
K-PV-1-179-CW	ELKAY	51300C	4/2017	AS NEED	Y
Q-PV-1-K-IM	3M	CFS117S	1/2017	YEARLY	N
Z-PV-1-K-CM	OMNIPURE	SCL10G4	???	????	N

Attachment E – Flushing Log
(Complete for each school as applicable)

Name of School: __Pascack Hills High School_____

Address: _225 West Grand Avenue, Montvale, NJ 07645_____

Grade Levels: __9-12, Pre-K_____

Individual School Project Officer Signature: _____ Date: _____

Sample Location Description	Sample Location Code	Date	Time	Duration of Flushing	Reason for Flushing

Attachment E – Flushing Log
(Complete for each school as applicable)

Name of School: Pascack Valley High School _____

Address: ___200 Piermont Avenue, Hillsdale, NJ 07642___

Grade Levels: __9-12, Pre-K_____

Individual School Project Officer Signature: _____ Date: _____

Sample Location Description	Sample Location Code	Date	Time	Duration of Flushing	Reason for Flushing

Attachment F - Pre – Sampling Water Use Certification

(Complete for each school)

TO BE COMPLETED BY THE Pascack Valley Regional High School DISTRICT REPRESENTATIVE:		
School Name: Pascack Hills		
Sample collection address:	225 West Grand Avenue, Montvale, NJ 07645	
Water was last used:	Time:9:00 PM	Date:6/15/17
Sample commencement:	Time:5:00 AM	Date:6/16/17
I have read the Pascack Valley Regional High School District Lead Drinking Water Testing Sampling Plan and Quality Assurance Project Plan and I am certifying that samples were collected in accordance with these plans.		
Signature		Date 6/17/17

TO BE COMPLETED BY THE Pascack Valley Regional High School DISTRICT REPRESENTATIVE:		
School Name: Pascack Valley		
Sample collection address:	200 Piermont Avenue, Hillsdale, NJ 07642	
Water was last used:	Time:9:00 PM	Date:6/15/17
Sample commencement:	Time:6:30 AM	Date:6/16/17
I have read the Pascack Valley Regional High School District Lead Drinking Water Testing Sampling Plan and Quality Assurance Project Plan and I am certifying that samples were collected in accordance with these plans.		
Signature 		Date 6/17/17

Attachment G - Example of a Sample Flush Tag

FLUSH TAG

Water outlet sampling in progress. Please do not use water

School District Name: Pascack Valley Regional High School District Date Flushed:

School Name: Pascack Hills High School Flushing Process

School Address: 225 West Grand Avenue, Montvale, NJ Start Time:

Location of flushed outlet: End Time:

Is the fountain front cover removed for the sampler to determine the reservoir type (circle one):
YES / NO

Person responsible for the flushing process (print name): _____

Signature: _____

* Water within the school distribution system should sit in the pipes unused for at least eight (8) hours after flushing but not more than 48 hours before a sample is taken.*

Note to the person responsible for the flushing process:

A. Turn-off lawn sprinkler outlet(s) until water sampling is complete.
B. Make sure sampling outlets are accessible.

H.iv: Sampling Event Checklist
Complete on the day of sampling

Before Beginning Sampling:

- Review and Sign QAPP.
- Review School packet prior to sampling- including floor plan with sample locations, outlet inventory including all outlets to be sampled, filter inventory including which water coolers & drinking water fountains have filters, and if applicable pre-sampling event flushing schedule [includes which outlets were flushed, the duration of flushing, and when they were flushed].
- Perform a walk-through of the facility prior to sampling. Identify all outlets to be sampled, and label each outlet with its unique sample location code as it is found in the water outlet inventory.
- Verify that the water has been stagnant for at least 8 hours, but no longer than 48 hours.

Sampling:

- Field Blank.
- Start sampling at the outlet closest to the point of entry.
- For each sampling location record the time that sampling begins.
- Wearing gloves, collect samples into a 250 ml pre-cleaned bottle.
- Record the time all samples are collected.
- AFTER all other samples have been collected, for follow-up flush sampling, collect fifteen minute flushed samples from water coolers.
- Indicate on the Chain of Custody (COC) if the outlet is leaking, the water is discolored, the outlet is turned on, the outlet is not working, or the outlet has a filter.
- Label all Follow-Up Flush Samples with "FLUSH" after their unique sample location code. (e.g. WHS- and WHS - ---FLUSH).

After Sampling:

- Record the time that sampling ends.
- Count sampling bottles to make sure all water outlets on the inventory were sampled.

	Alex Toth		6/16/17
Project Officer:	Print Name	Signature	Date
Sampler:	Al Oswald		6/16/17
	Print Name	Signature	Date

H.vi: School Sampling Package Review Checklist

Review performed by: _Al Martin/Facilities Manager_____ Date: __6/30/2017_____
Name/Title

Name of NJ Certified Laboratory who performed the analytical testing and certification number:

Name: IATL International Asbestos Testing Laboratories_ Certification #: NJDEP No. 03863

1. QAPP signed by all parties involved in sampling (Program Manager, Project Manager, Individual School Project Officers, Laboratory Manager, Laboratory QA Officer):
   Y or N: Y
   If N, obtain.

2. Completed Plumbing Profile (Attachment B):
   Y or N: Y
   If N, provide details on what is missing.
   If Y, should include:
   i. Material of Service line: **Y or N: Y**
      a. Is the school served by a lead service line? **Y , N , or Unknown: N**
         i. Must provide documentation for either Y or N answer. If Unknown need to provide a plan for getting this information. *See Verification Letter*
   ii. Material of potable water pipes: **Y, N , or Unknown: Y**
      a. Was lead solder used in the plumbing system? **Y , N , or Unknown: Y (probable due to year of construction)**
      If Unknown, need to provide a plan for getting this information.
      b. Are brass fittings, faucets, or valves used in the drinking water system? **Y or N: Y**
   iii. Make and Model of Drinking Water Fountains/ Water Coolers: **Y or N: Y**
      a. Checked all the drinking water fountains and coolers against the EPA list of recalled fountains: **Y or N: Y**
         i. If Y, any fountains that were on the list were taken out of service and the information was recorded in the school file.N/A
   iv. 'Low use' areas in the drinking water system: **Y or N: N**
      a. If Y, identify where. Verify that these areas were flushed properly.
   v. Out-of-Service Outlets : **Y or N: Y**
      a. If Y, identify where. Verify that these areas are still out of service.
   vi. Plumbing repairs and replacements performed within the last year: **Y or N: Y**
      a. If Y, identify where. *See Maintenance Email.*
3. Is Water Outlet Inventory (Attachment C) for the school completed with all information filled in? **Y or N; Y**
   If N, provide details on what is missing.

4. Completed Filter Inventory (Attachment D): **Y or N: Y**
   If N, provide details on what is missing.

5. Completed Flushing Log (Attachment E): **Y, N or NA: NA**
   Only applicable for facilities or specific locations in a facility that are not routinely used e.g. concession stands.
   If Y, does it include duration and location of flushes? **Y or N**
   If N, provide details.

6. Completed data packages for each sampling event including Chain of Custody sheets, field notes, results report and Excel spreadsheet: **Y or N: Y**
   If N, provide details on what is missing.

Data Package Review

1. Is the data package complete: **Y or N: Y**
   a. If N, provide details on what is missing and contact lab if necessary.

2. Does the number of samples on the results report from the laboratory match the number of samples on the Chain of Custody? **Y or N: Y**
   a. If N, identify which sample(s) are missing. Add these sampling locations to the Follow-Up Sampling list.

3. Is there a field blank? **Y or N: N**

4. Are results reported in µg/l? **Y or N: Y**
   a. If N, remind lab to report in µg/l.

5. Any results not reported to at least 3 significant figures? **Y or N: N**
   a. If Y, contact lab.

6. Any results above 100 µg/l? **Y or N: Y**
   a. If Y, have lab verify the results. *See Chain of Custody Forms.*

7. Compared field notes/ Chain of Custody notes with sampling results? **Y or N: Y**
   a. If Y, are there any notes and sampling results that appear to need re-sampling? Add those sampling locations to the Follow-Up Sampling list. (i.e. notes indicate outlet was leaking or water was discolored)

8. Are there outlets that could not be sampled because they were not operational? **Y or N: N**

a. If Y, outlets will be need to be sampled as part of follow-up sampling. Add these outlets on the Follow-Up Sampling list.

9. Are there sample codes not identified on the Key Code? **Y or N: N**
    a. If Y, contact sampler and individual school coordinator to identify.

10. Verify that water outlets requiring flushing were properly flushed: **Y or N: Y**
    a. Are there outlets that were sampled and after reviewing the field notes it is apparent they were not operational prior to sampling and/or were not flushed? **Y or N**
    b. If Y, these outlets need to be resampled as part of follow-up sampling. Add these outlets on the Follow-up sampling list.

11. Compared first draw samples with follow-up flush samples (if collected): **Y or N: N**

12. Are there outlets where the follow-up flush sample is required but was not collected? **Y or N: N**
    a. If Y, these outlets need to be sampled as part of the follow-up sampling. Add these outlets to the Follow-up Sampling list.

13. Are there any follow-up flush sample outlets higher than the first draw? **Y or N: Unknown**
    a. If Y, identify the internal plumbing material.

14. Match up the filters with the exact locations they are installed. Determine the following:
    a. Exact date installed: **Y, N, or Unknown: Y**
    b. If N, return to location and identify.
    c. If Unknown, assume the filter will need to be replaced.

Pascack Valley Regional High School District

Allan Martin, Facilities Manager

201-358-7020 x22021

amartin@pascack.org

June 27, 2017

To Whom It May Concern:

On a weekend in the winter of 2017, the service line to Pascack Hills High School burst resulting in the plumbing crew needing to come out to make repairs. When they arrived on the grounds, they dug up the service line to reveal the pipe being cast iron.

When at the emergency repair site, I visually confirmed this material. Additionally, I engaged in a conversation with a representative from Suez Water. During that conversation, he explained that both Pascack Hills and Pascack Valley High Schools are fed by four-inch cast iron service lines.

Sincerely,

Allan Martin

Facilities Manager

Martin, Allan <amartin@pascack.org>

replacement dates

1 message

Toth, Alex <atoth@pascack.org> Wed, Jun 28, 2017 at 8:25 AM
To: Allan Martin <amartin@pascack.org>

faucets by band bathrooms june 16 2016
fountain by band feb 1 2017
fountain by main entrance and 2nd floor march 2017
faucets in kitchen December 2016

Hills

all fountains were done in April and start of may
all kitchen faucets were done during spring break

H.vii: FOLLOW-UP SAMPLING INVENTORY

School Name__Pascack Hills High School _____
Individual School Project Officer: ___Alex Toth_____
Date Completed: _____

SAMPLE ID/ LOCATION	REASON FOR FOLLOW-UP SAMPLING*	DATE RESAMPLED

H.x_ Data Review Summary

School: __Pascack Hills High School_____
Date Sampled: __6/16/17_____
Individual School Project Officer: __Alex Toth_____

☑ Verify number of samples.
- Make sure there are results for each sample taken.

Number of outlets sampled: __25_____
Number of first draw: ___25_____
Number of follow-up flush: _____

☑ Confirm all results are reported with no less than three significant figures and are in units of µg/l or ppb.

☐ Confirm follow-up flush samples are collected at all water outlets that require a flush sample.

Number of samples >15.5 µg/l first draw: _____
Number of samples >15.5 µg/l follow-up flush: _____
Total Number of samples >15.5µg/l: _____

For samples >15.5 µg/l

☐ Compare first draw samples with follow-up flush samples.

Number of outlets with decreased result between first draw and follow-up flush (> 15.5 µg/l and now < 15.5 ppb): _____
Number of outlets increased between first draw and follow-up flush (< 15.5 µg/l and now > 15.5 µg/l):_____
Number of outlets that remained > 15.5 µg/l (both results greater than 15.5 µg/l):_____

☐ Verify follow-up flush samples that are higher than the first draw sample.
- Check field notes and chain of custody for notes on the collection of these samples.
- Check with lab to verify the sample result of these samples.

☐ Verify results > 100 µg/l
- Call the lab to verify the results .
- Make sure the lab report indicates that the sample was diluted.

☐ Verify sample results with field notes and chain of custody.
- Use the field notes on the Chain Custody to provide insight on what may have caused certain high results.

The following information is based on field notes and the chain of custody:

Number of outlets not sampled: ___0_____

Sample ID of outlets that do not work/broken: ____none_____

Number of outlets leaking/dripping (not repaired): ___none_____
Sample ID of outlets leaking/dripping: _____

Number of outlets with low pressure/slow flow: __none_____
Sample ID of outlets with low pressure/slow flow: _____

Number, description, and Sample ID of other outlet issues (i.e. color, odor, plumbing turned off, etc.):____none_____

☑ Verify the water outlets requiring pre-sampling flushing were flushed.
- Check the low use outlet flush log located in the school package to verify that outlets were flushed properly prior to sampling.

☑ Verify Drinking Water Fountain & Water Cooler Filters.
- Use the filter inventory in the school package to document whether or not drinking water fountains and water coolers have a filter.

☑ Verify unknown sample codes.
- Make sure that ALL sample IDs used are included in the District's outlet coding list.
- Identify all sample IDs that are not listed on the coding list.

Additional information: _____

H.x_ Data Review Summary

School: __Pascack Valley High School_____
Date Sampled: __6/16/17_____
Individual School Project Officer: __Alex Toth_____

☑ Verify number of samples.
- Make sure there are results for each sample taken.

Number of outlets sampled: ___30_____
Number of first draw: _____30_____
Number of follow-up flush: _____

☑ Confirm all results are reported with no less than three significant figures and are in units of µg/l or ppb.

☐ Confirm follow-up flush samples are collected at all water outlets that require a flush sample.

Number of samples >15.5 µg/l first draw: _____
Number of samples >15.5 µg/l follow-up flush: _____
Total Number of samples >15.5µg/l: _____

For samples >15.5 µg/l

☐ Compare first draw samples with follow-up flush samples.

Number of outlets with decreased result between first draw and follow-up flush (> 15.5 µg/l and now < 15.5 ppb): _____
Number of outlets increased between first draw and follow-up flush (< 15.5 µg/l and now > 15.5 µg/l):_____
Number of outlets that remained > 15.5 µg/l (both results greater than 15.5 µg/l):_____

☐ Verify follow-up flush samples that are higher than the first draw sample.
- Check field notes and chain of custody for notes on the collection of these samples.
- Check with lab to verify the sample result of these samples.

☐ Verify results > 100 µg/l
- Call the lab to verify the results .
- Make sure the lab report indicates that the sample was diluted.

☐ Verify sample results with field notes and chain of custody.
- Use the field notes on the Chain Custody to provide insight on what may have caused certain high results.

The following information is based on field notes and the chain of custody:

Number of outlets not sampled: __0_____

Sample ID of outlets that do not work/broken:
___none_____

Number of outlets leaking/dripping (not repaired): __none_____
Sample ID of outlets leaking/dripping: ____none_____

Number of outlets with low pressure/slow flow: ___none_____
Sample ID of outlets with low pressure/slow flow: ___none_____

Number, description, and Sample ID of other outlet issues (i.e. color, odor, plumbing turned off, etc.):___none_____

☑ Verify the water outlets requiring pre-sampling flushing were flushed.
- Check the low use outlet flush log located in the school package to verify that outlets were flushed properly prior to sampling.

☑ Verify Drinking Water Fountain & Water Cooler Filters.
- Use the filter inventory in the school package to document whether or not drinking water fountains and water coolers have a filter.

☑ Verify unknown sample codes.
- Make sure that ALL sample IDs used are included in the District's outlet coding list.
- Identify all sample IDs that are not listed on the coding list.

Additional information: _____

Attachment B.i: Plumbing Profile Instructions

Plumbing Profile Questions	What Your Answers to the Plumbing Profile Questions Mean
The questions in this column will help you determine whether lead is likely to be a problem in your facility, and will enable you to prioritize your sampling effort.	*This column discusses the significance of possible answers to the plumbing profile questions.*
Background Information	
1. When was the original building constructed? Were any buildings or additions added to the original facility? If so, complete a separate plumbing profile for each building, addition, or wing.	Older Buildings – Through the early 1900s, lead pipes were commonly used for interior plumbing in certain parts of the country in public buildings and private homes. Plumbing installed before 1930 is more likely to contain lead than newer pipes. Between 1920 and 1950, galvanized pipes were also used for plumbing. After 1930, copper generally replaced lead as the most commonly used material for water pipes. Up until the mid- to late-1980s (until the lead-free requirements of the 1986 Safe Drinking Water Act Amendments took effect), lead solder was typically used to join these copper pipes. The efforts of your public water supplier over the years to minimize the corrosiveness of the water may have resulted in mineral deposits forming a coating on the inside of the water pipes (passivation). This coating insulates the water from the plumbing and results in decreased lead levels in water. If the coating does not exist or is disturbed, the water is in direct contact with any lead in the plumbing system. Newer Buildings – New buildings are not likely to have lead pipes in their plumbing systems, but they are very likely to have copper pipes with solder joints. Buildings constructed prior to the late 1980s, before the lead-free requirements of the 1986 Safe Drinking Water Act Amendments, may have joints made of lead solder. Buildings constructed after this period should have joints made of lead-free solders. Even if "lead-free" materials were used in new construction and/or plumbing repairs, lead leaching may occur.

2. If built or repaired after 1986, were lead-free plumbing and solder used in accordance with the lead-free requirements of the 1986 Safe Drinking Water Act Amendments? What type of solder has been used? Was lead solder used in your plumbing system? Note the locations of lead solder.	The 1986 Amendments to the Safe Drinking Water Act banned plumbing components that contained elevated levels of lead. Lead-free solder and flux (not more than 0.2% lead) and pipe, pipe fittings, and fixtures (not more than 8% lead) must now be used. The leaching potential of lead-free (i.e., tin-antimony) solder is much less than lead solder. The leaching potential of lead-free pipe, pipe fittings, and fixtures is also less, but leaching is still possible. If lead-free materials were not used in new construction and/or plumbing repairs, elevated lead levels can be produced. If the film resulting from passivation does not exist or has not yet adequately formed, any lead that is present is in direct contact with the water. In some areas of the country, it is possible that high-lead materials were used until 1988 or perhaps even later. Your local plumbing code authority or building inspector may be able to provide guidance regarding when high-lead materials were last used on a regular basis in your area.
3. When were the most recent plumbing repairs and replacements made (note locations)?	Corrosion occurs (1) as a reaction between the water and the pipes and (2) as a reaction between the copper and solder (metal-to-metal). This latter reaction is known as galvanic corrosion, which can be vigorous in new piping. If lead solders were used in the piping or if brass faucets, valves, and fittings containing alloys of lead were installed *(see response to Walk Through Question 5 below for further discussion of brass)*, lead levels in the water may be high. After about 5 years, however, this type of reaction (galvanic corrosion) slows down and lead gets into water mainly as a result of water being corrosive. If the water is non-corrosive, passivation is likely to have occurred and to have reduced opportunities for lead to get into the water system. For these reasons, if the building (or an addition, new plumbing, or repair) is less than 5 years old and lead solder or other materials (e.g., brass faucets containing lead alloys) were used, you may have elevated lead levels. If water supplied to the building is corrosive, lead can remain a problem regardless of the plumbing's age.

4. With what materials is the service connection (the pipe that carries water to the school from the public water system's main in the street) made? Note the location where the service connection enters the building and connects to the interior plumbing. (This is the POE location)	Lead piping was often used for the service connections that join buildings to public water systems. The service connection is the pipe that carries drinking water from a public water main to a building. Some localities actually required the use of lead service connections up until the lead-free requirements of the 1986 Safe Drinking Water Act Amendments took effect. Although a protective layering of minerals may have formed on these pipes, vibrations can cause flaking of any protective build-up and, allowing lead contamination to occur.
5. Is there point of entry (POE) or point of use (POU) treatment in use?	Are there water treatment units in your plumbing system? Treatment units could be, but are not limited to, ion exchange units, filter cartridge, reserve osmosis, etc.
6. Do you have tanks in your plumbing system (pressure tanks, gravity storage tanks)? Note the location of any tanks, and any available information about the tank; e.g., manufacturer, date of installation.	Some older tanks may contain coatings that are high in lead content. Tanks may accumulate sediment that could be flushed back into the plumbing system under certain circumstances. You may wish to contact the supplier or manufacturer to obtain information about coatings. You may also wish to hire a plumber or tank service contractor to inspect your tanks, especially gravity storage tanks that are located outside of the building.
7. Does the school have a filter maintenance and operation program? If so, who is responsible for this program? What is the process for adding filters?	A program for the maintenance and the upkeep of filters on drinking water outlets is necessary to ensure the effectiveness of the filters. Most filters recommend replacement after six months. If the filters need replacement every six months, the program will include a procedure for ensuring that every six month old filter is replaced. An individual should be responsible for ensuring that this filter maintenance program is followed. If the school would like to add a filter to a water outlet, what is the process? Does a request form have to be completed and submitted to the individual in charge of maintenance? Do all filters need to be added at a certain time of year to follow the maintenance program?

8. Do outlets that provide drinking water have accessible screens or aerators? (Standard faucets usually have screens. Many coolers and bubblers also have screens.) Note the locations. Have these screens been cleaned? Note the locations.	Lead-containing sediments that are trapped on screens can be a significant source of lead contamination. Sediments should be tested for the presence of lead, and your facility should create a routine maintenance program to clean the screens frequently. If sediment has been a reoccurring problem regular cleaning of the screens and additional investigating into why the debris is accumulating is appropriate. However, the manufacturer or water service provider should be contacted to obtain instructions.
9. Have there been any complaints about water taste (metallic, etc.) or rusty appearance? Note the locations.	Although you cannot see, taste, or smell lead dissolved in water, the presence of a metallic taste or rusty appearance may indicate corrosion and possible lead contamination.
10. Check building files to determine whether any water samples have been taken from your building for any contaminants (also check with your public water supplier). • Name of contaminant(s)? • What concentrations of these contaminants were found? • What was the pH level of the water? • Is testing done regularly at your facility?	Lead testing may have previously been done voluntarily under the Lead Contamination Control Act. Results of analyses of general water quality, such as measures of pH, calcium hardness, and carbonate alkalinity, can provide important clues about the corrosiveness of the water. Generally, the higher the values of these parameters, the less likely it is that your water is corrosive. If you have no data from your school, your public water system should at least be able to provide information about the general water quality.

11. Other plumbing questions: • Are blueprints of the building available? • Are there known plumbing "dead-ends," low use areas, existing leaks or other "problem areas"? • Are renovations being planned for part or all of the plumbing system?	You should incorporate this information into decisions regarding sample locations and sampling protocol. You may wish to note the direction of water flow and the location of fixtures, valves, tanks, areas of sediment accumulation, areas of corrosion, etc., on a sketch or blueprint of the plumbing.
Walk-Through	
1. Confirm the material that the service line is made of visually	See Background Information Question #4.
2. Confirm the presence of POE or POU treatment.	See Background Information Question #5

3. Specifically, what are the potable water pipes made of in your facility (note the locations)? • Lead • Plastic • Galvanized Metal • Cast Iron • Copper • Other Note the location of the different types of pipe, if applicable, and the direction of water flow through the building. Note the areas of the building that receive water first, and which areas receive water last.	Survey your building for exposed pipes, preferably accompanied by an experienced plumber who should be able to readily identify the composition of pipes on site. Most buildings have a combination of different plumbing materials: • Lead pipes are dull gray in color and may be easily scratched by an object such as a knife or key. Lead pipes are a major source of lead contamination in drinking water. • Galvanized metal pipes are gray or silver-gray in color and are usually fitted together with threaded joints. In some instances, compounds containing lead have been used to seal the threads joining the pipes. Debris from this material, which has fallen inside the pipes, may be a source of contamination. • Copper pipes are red-brown in color. Corroded portions may show green deposits. Copper pipe joints were typically joined together with lead solders until the lead-free requirements of the 1986 Safe Drinking Water Act Amendments took effect. • Plastic pipes, especially those manufactured abroad, may contain lead. If plastic pipes are used, be sure they meet NSF International standards. *(Note: NSF International is an independent, third-party testing organization. Product listings can be obtained by visiting their Web site at http://www.nsf.org/ business/search_listings/index/asp.)*
4. Is any electrical equipment grounded to water pipes? Note the locations.	If electrical equipment, such as telephones, has been installed using water pipes as a ground, the electric current traveling through the ground wire will accelerate the corrosion of any interior plumbing containing lead. The practice should be avoided, if possible. However, if existing wires are already grounded to water pipes, the wires *should not be removed* from the pipes unless a qualified electrician installs an alternative grounding system. Check with your local building inspector on this matter. Your state or local building code may require grounding of the wires to the water pipes. Improper grounding of electrical equipment may cause severe shock.

5. Are brass fittings, faucets, or valves used in your drinking water system? (Note: Most faucets are brass on the inside.) You may want to note the locations on a map or diagram of your facility and make extensive notes that would facilitate future analysis of lead sample results.	Brass fittings, faucets, and valves are golden yellow in color, similar to copper in appearance, or are plated with chrome. Brass is composed primarily of two metals, copper and zinc. Most brasses contain lead ranging from 2 percent to 8 percent. That lead can contaminate the water contact surface when it is smeared on the machined surfaces during production. After 1996, brass fittings installed in drinking water outlets such as faucets and water coolers must meet NSF standards for lead content. While this percentage is considered lead-free under the 1986 Safe Drinking Water Act Amendments, some contamination problems still may occur. Older brass faucets may contain higher percentages of lead and lead solder in their interior construction and pose contamination problems. Note that your state or local govemment may have imposed this standard prior to 1988. The degree to which lead will leach from brass products containing alloys with less than 8 percent lead is dependent upon the corrosiveness of the water and the manufacturing process used to develop the product. A study revealed that fabricated faucets tend to contribute less lead to the water than faucets manufactured by the permanent mold process, regardless of the amount of lead in the alloy. In response to a requirement of the 1996 SDWA, EPA worked with the plumbing industry and NSF International to develop a voluntary industry standard that is designed to minimize the amounts of lead being leached from these products. This standard is NSF/ANSI Standard 61, Section 9. Since 1998, all plumbing fixtures for use as drinking water supply must meet this standard. You should require NSF/ ANSI 61 certification on all drinking water system products purchased. Include a copy of the NSF/ ANSI 61 certificate as a requirement on your purchase orders. The distributor or manufacturer can provide you with a list of certified products. You should require NSF/ANSI 61 certification on all drinking water system products used in new construction and inform your architects and revise your building specifications.
6. How many of the following outlets provide water for consumption? Note the locations. • Water Coolers • Bubblers • Ice Makers • Kitchen Taps • Drinking Fountains or Taps	In addition to lead components in the plumbing system, lead solders or lead in the brass fittings and valves used in some taps, bubblers, and refrigerated water coolers may be sources of lead. It is important to identify the locations of all such drinking water outlets. Faucets in restrooms should not be used to obtain water for drinking. Although they may be adequate for washing hands, they may not be appropriate for drinking purposes. You may consider posting "do not drink" signs.

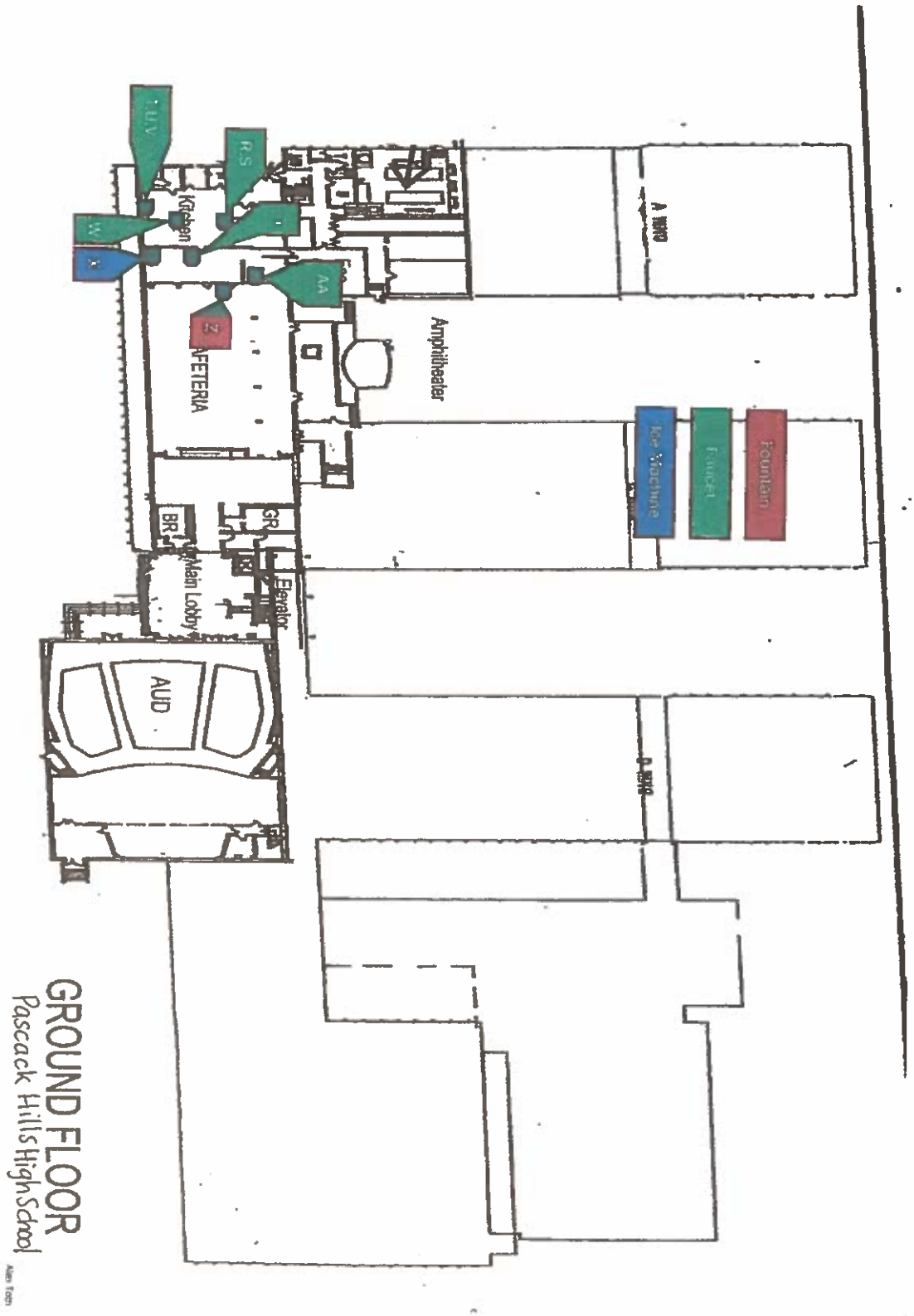
7. Has your school checked the brands and models of water coolers and compared them to the list of recalled water coolers in Appendix H.i Note the locations of any recalled coolers.	Water coolers may be a major source of lead contamination. The Federal Consumer Product Safety Commission negotiated an agreement with Halsey Taylor through a consent order agreement published in June 1990 to provide a replacement or refund program that addresses all the water coolers listed by EPA as having lead-lined tanks. Halsey Taylor was the only company identified by EPA as manufacturing some water coolers with lead-lined tanks. Additionally, some coolers manufactured by EBCO had a bubbler valve and one soldered joint that contained lead. See Attachment H.i of this document for a summary of EPA's list of water coolers found to contain lead. Use the list to help prioritize your sampling. If your water cooler is listed as having a lead-lined tank, you should not use the water for drinking, and you should remove the cooler immediately as these coolers pose the highest risk of contamination.
8. Are there any signs of corrosion, such as frequent leaks, rust-colored water, or stained dishes or laundry? Note the locations.	Frequent leaks, rust-colored water, and stains on fixtures, dishes, and laundry are signs of corrosive water. Blue-green deposits on pipes and sinks indicate copper corrosion; brown stains result from the corrosion of iron. Where such signs occur, high levels of lead, copper, and iron may be present in the water. Lead can accumulate with iron, which can form sediments that are hard to remove.
9. Are there any outlets that are not operational and therefore out of service? Permanently? Temporarily?	Permanently out of service water outlets are outlets that are no longer being used and the facility plans to decommission in the future. Temporarily out of service water outlets are outlets that require repair or replacement and will be put back in service once they are operational.

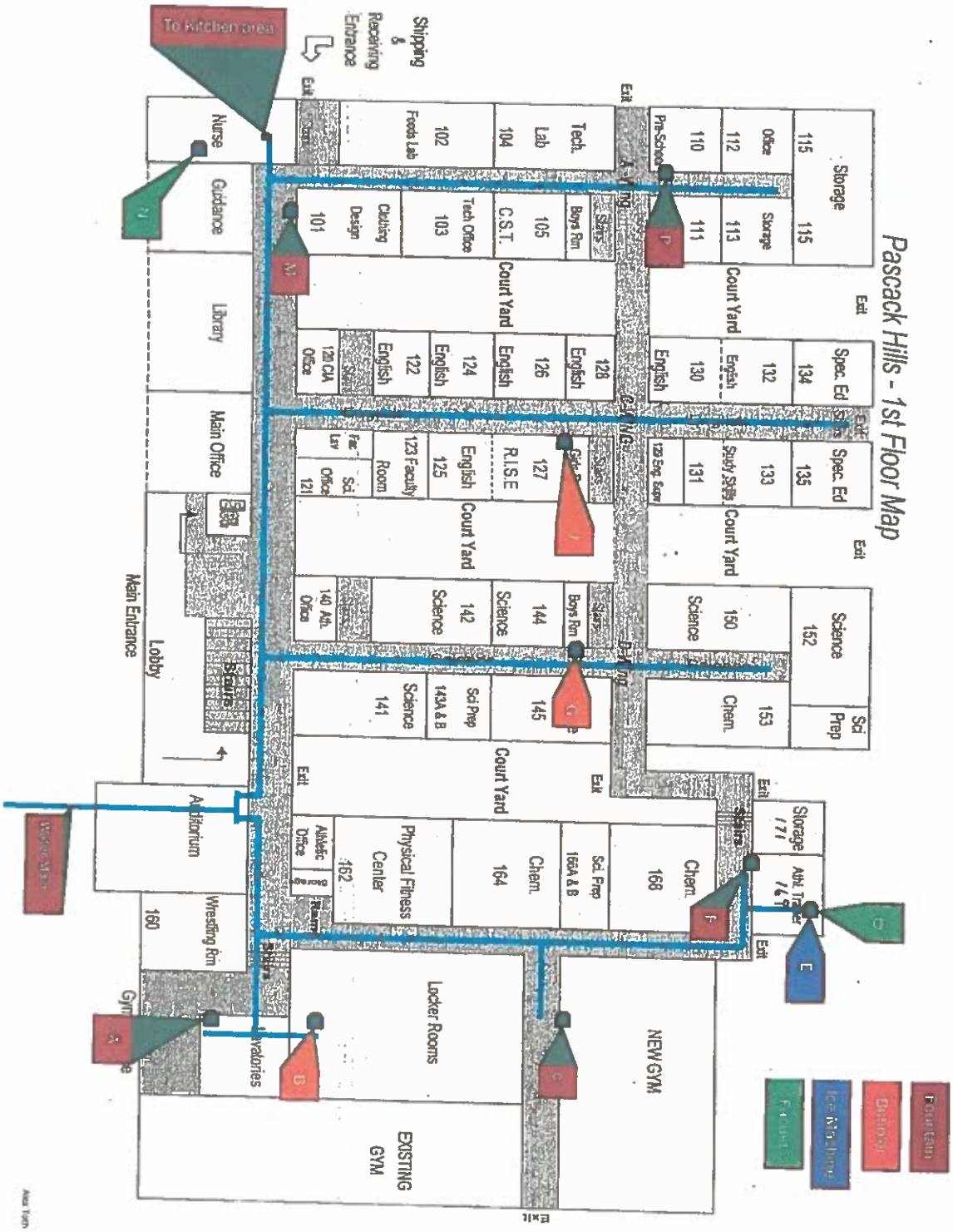
Pascack Hills High School
Identification Chart

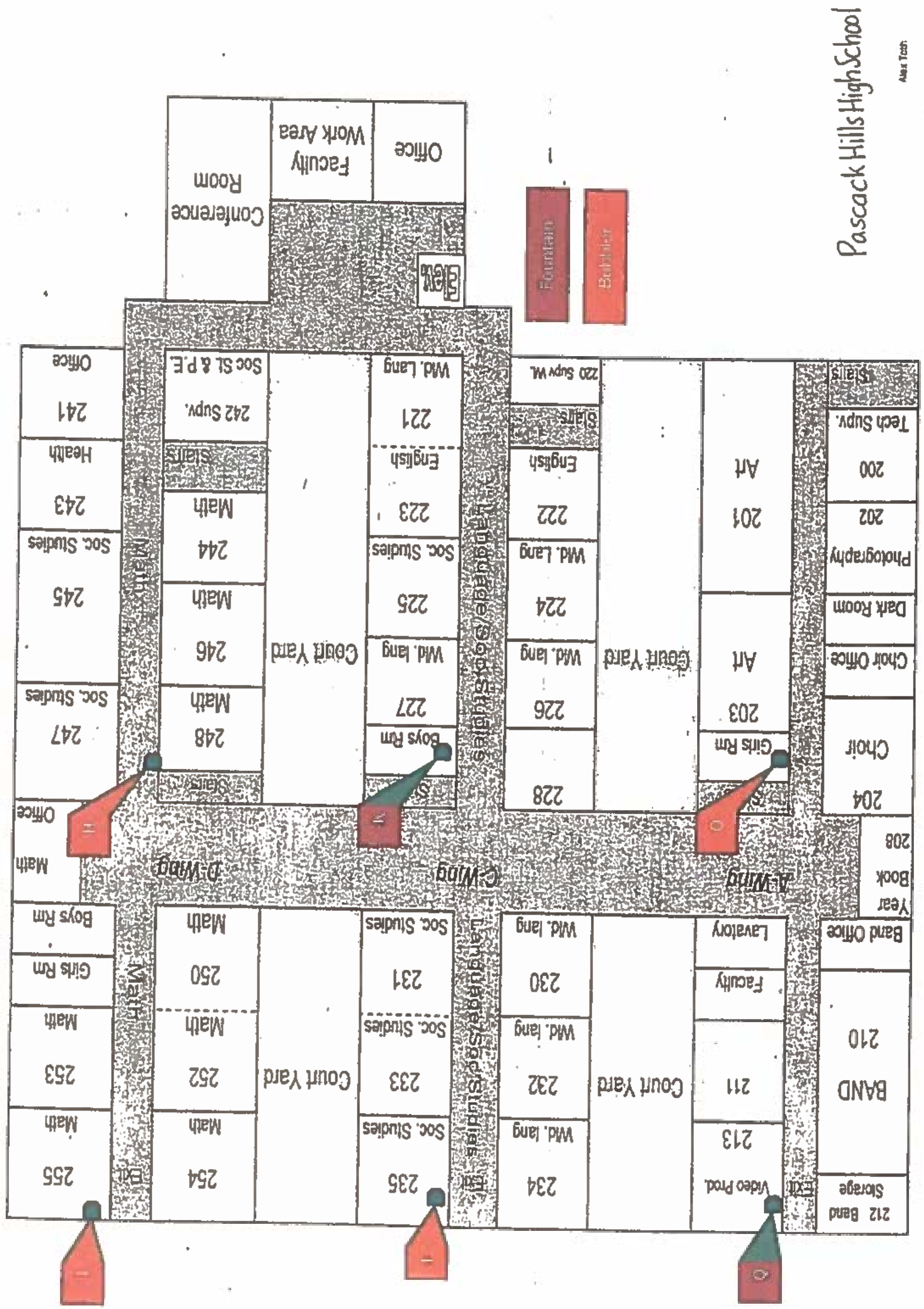
A. A-PH-1-GE-CW
B. B-PH-1-LR-B
C. C-PH-1-NG-CW
D. D–PH-1-169- IM
E. E-PH-1-169-F
F. F-PH-1-171-CW
G. G-PH-1-144-B
H. H-PH-2-248-B
I. I-PH-2-255-B
J. J-PH-1-127-B
K. K-PH-2-227-CW
L. L-PH-2-235-B
M. M-PH-1-101-CW
N. N-PH-1-NUR-F
O. O-PH-2-203-B
P. P-PH-1-110-CW
Q. Q-PH-2-213-CW
R. R-PH-K-FP
S. S-PH-K-F1
T. T-PH-K-F2
U. U-PH-K-F3
V. V-PH-K-F4
W. W-PH-K-FP
X. X-PH-K-IM
Y. Y-PH-K-F5
Z. Z-PH-C-CW
AA. AA-PH-K-F6

Pascack Hills High School
Identification Chart ID

GE= Gym Entrance
LR= Locker Room
NG = New Gym
NUR = Nurse
K = Kitchen
CW = Cooler Water
B = Bubbler
IM = Ice Machine
F= Faucet
FP = Food Prep


Kitchen
AFETERIA
Amphitheater
Ice Machine
Faucet
Fountain
BR
GR
Main Lobby
Elevator
AUD
GROUND FLOOR
Pascack Hills High School


Pascack Hills - 1st Floor Map
To Kitchen area
Shipping & Receiving Entrance
Nurse
Guidance
Library
Main Office
Main Entrance
Lobby
Auditorium
Wrestling Rm
160
Storage 115
Office 112
Pre-School 110
Tech. Lab 104
Foods Lab 102
Clothing Design 101
Tech Office 103
C.S.T. 105
Boys Rm
Court Yard
Storage 113
English 111
English 130
Spec. Ed 134
Spec. Ed 135
Spec. Ed 132
English 133
Study Skills 131
123 Eng. Supv
English 128
English 126
English 124
English 122
128 CIA Office
Fac. Lav
123 Faculty Room
Sci. Office 121
127 R.I.S.E
English 125
140 Adv. Office
Science 144
Science 142
Science 141
Science 150
Science 152
Chem. 153
Sci Prep
Boys Rm
145
Sci Prep 143A & B
Athletic Office
Physical Fitness Center 162
Chem. 164
Sci. Prep 166A & B
Chem. 168
Storage 171
Locker Rooms
NEW GYM
EXISTING GYM
Exit



Pascack Hills HighSchool
Conference Room
Faculty Work Area
Office
Fountain
Bubbler
A-Wing
C-Wing
D-Wing
Math
Language/Soc. Studies
Court Yard
200
201
202
203
204
208
210
211
212 Band Storage
213
221
222
223
224
225
226
227
228
230
231
232
233
234
235
241
242 Supv.
243
244
245
246
247
248
250
252
253
254
255
Art
BAND
Band Office
Choir
Choir Office
Dark Room
Photography
Tech Supv.
Year Book
Girls Rm
Boys Rm
Lavatory
Faculty
Video Prod.
English
Wld. Lang
Soc. Studies
Health
Office
Stairs
Exit

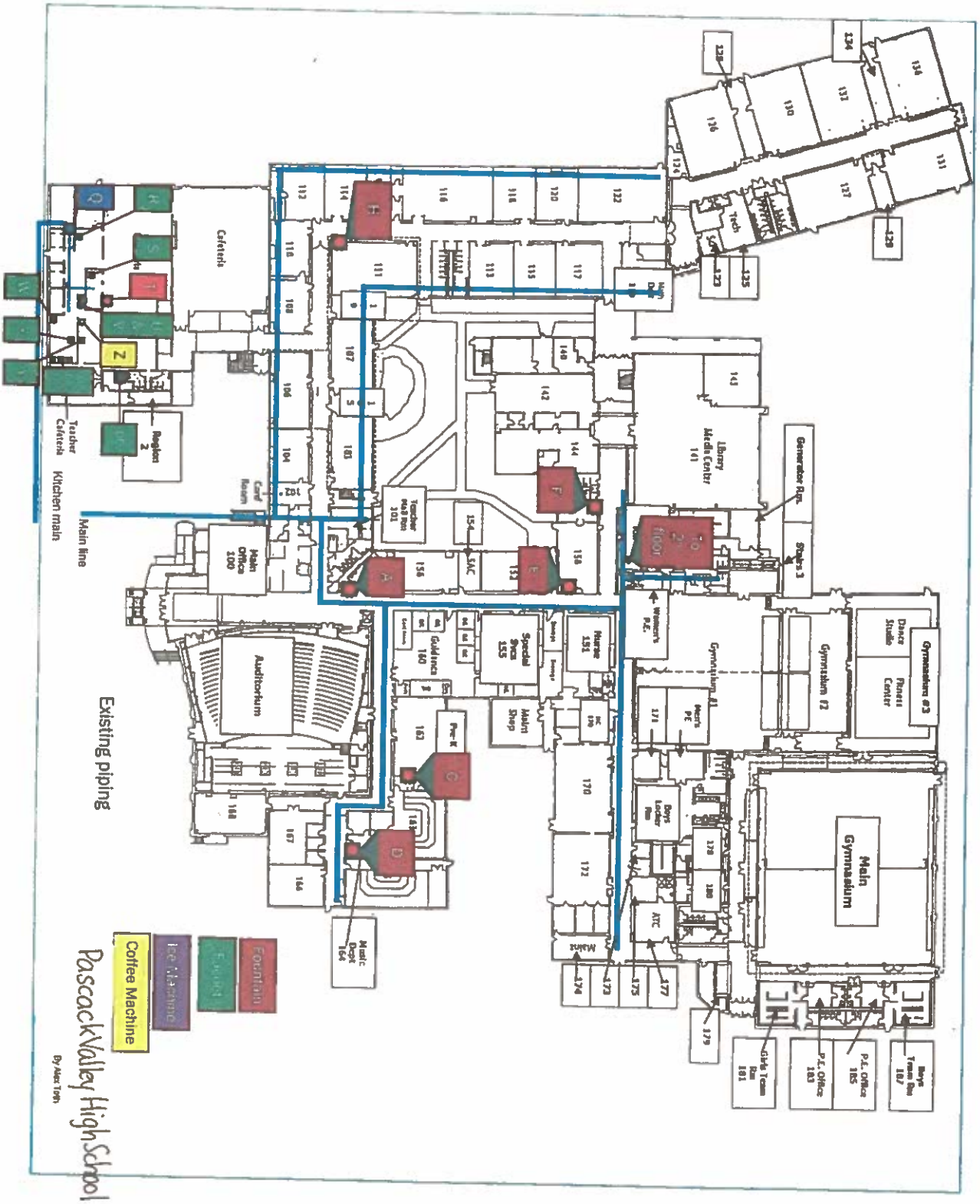
Pascack Valley High School
Identification Chart

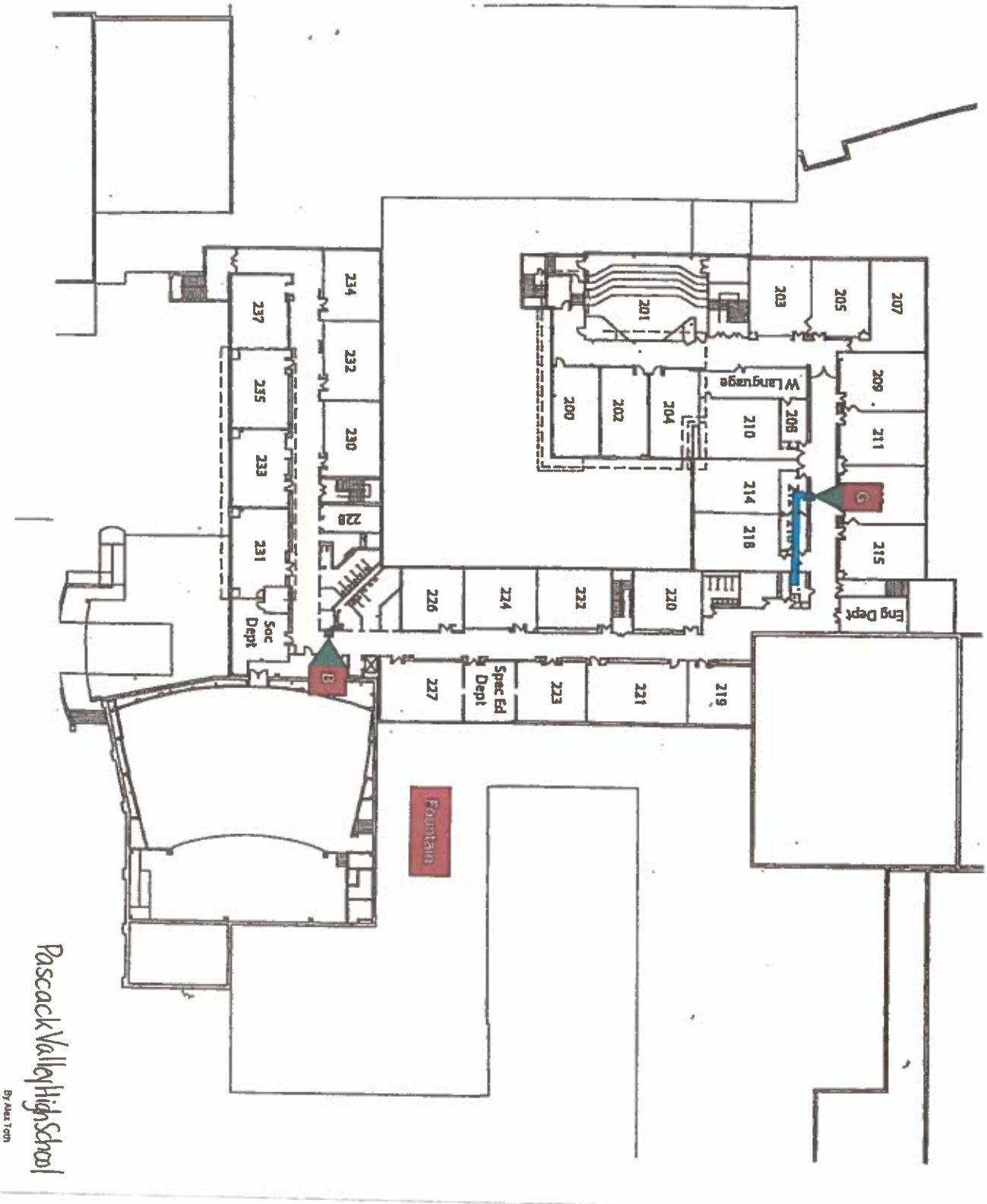
A. A-PV-1-ME-CW
B. B-PV-2-229-CW
C. C-PV-1-162-CW
D. D-PV-1-165-CW
E. E-PV-1-151-CW
F. F-PV-1-144-CW
G. G- PV-2-213-CW
H. H-PV-1-114-CW
I. I-PV-1-177-IM
J. J-PV-1-177-F
K. K-PV-1-179-CW
L. L-PV-1-???-CW
M. M-PV-1-183R-CW
N. N-PV-1-183L-CW
O. O-PV-1-141-CW
P. P-PV-1-128-CW
Q. Q-PV-1-KS-CW
R. R-PV-1-K-KC
S. S-PV-1-K-KC
T. T-PV-1-C-CW
U. U-PV-1-K-FP
V. V-PV-1-K-KP
W. W-PV-1-K-KC
X. X-PV-1-K-KC
Y. Y-PV-1-K-FP
Z. Z-PV-1-K-CM
AA. AA-PV-1-K-FP
BB. BB-PV-1-K-FP
CC. CC-PV-1-K-FP
DD. DD-PV-1-WC-F

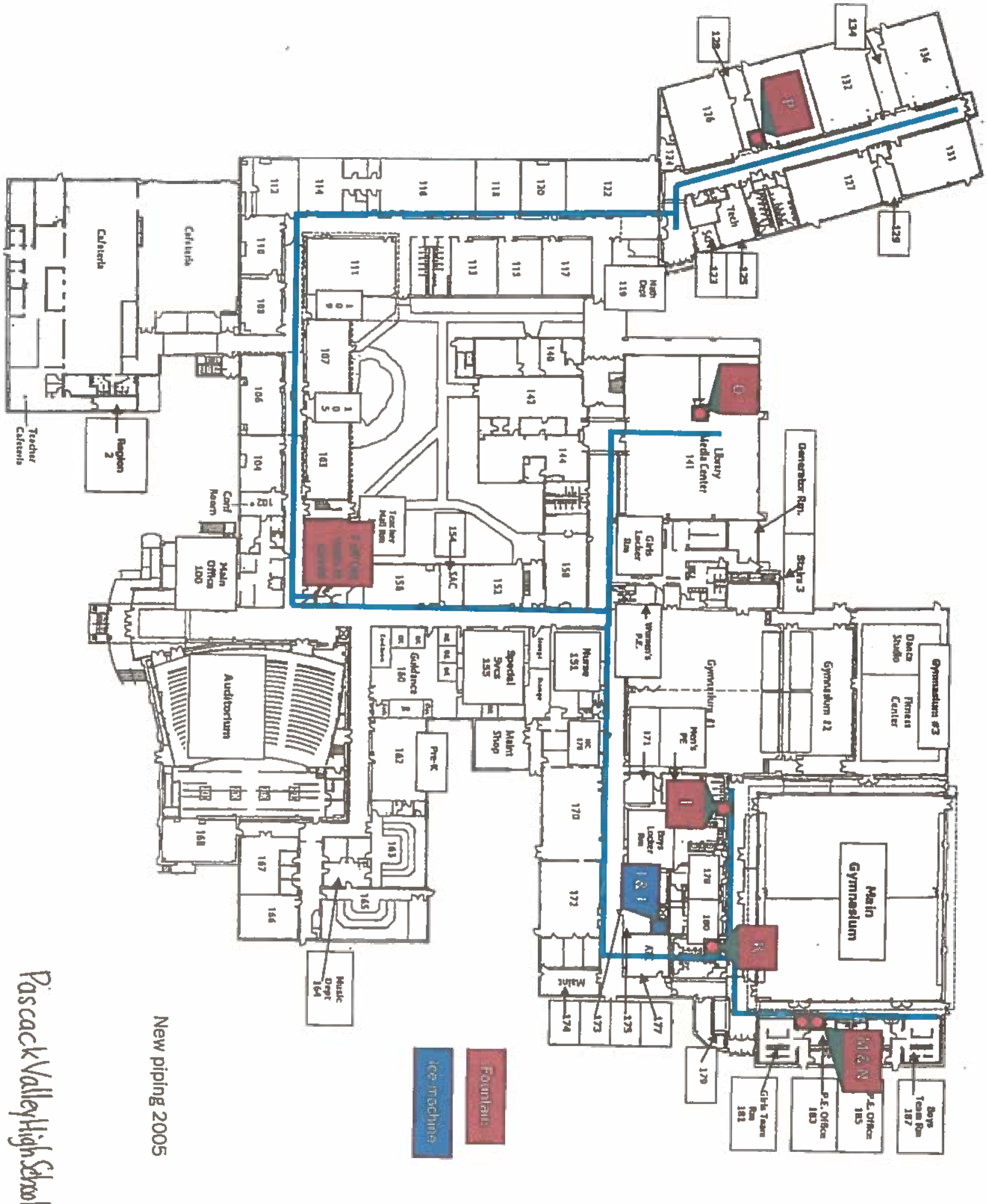
By Alex Toth

Pascack Valley High School
Identification Chart ID

GE= Gym Entrance
LR= Locker Room
NG = New Gym
NUR = Nurse
K = Kitchen
CW = Cooler Water
B = Bubbler
IM = Ice Machine
F= Faucet
FP = Food Prep


Existing piping
Main line
Kitchen main
Teacher Cafeteria
Cafeteria
Region 2
Staff Room
Main Office 100
Auditorium
Guidance 160
Special Ops 155
Nurse 151
Main Dept
Pre-K
Music Dept 164
Library Media Center 141
Generator Rm.
Shops 3
Women's P.E.
Gymnasium #1
Gymnasium #2
Dance Studio
Fitness Center
Men's P.E.
Boys Locker Rm
Main Gymnasium
ATC
Girls Team Rm 181
P.E. Office 183
P.E. Office 185
Boys Team Rm 187
Coffee Machine
Ice Machine
Fountain
Pascack Valley High School
By Alec Tran


Pascack Valley High School
By Alex Tom
Fountain
Soc Dept
Spec Ed Dept
Eng Dept
W Language
201
203
205
207
209
211
200
202
204
210
208
214
216
215
234
237
232
235
230
233
231
226
224
222
220
227
223
221
219
G
B


Pascack Valley High School
By Alex Toth
New piping 2005
Fountain
ice machine
Main Gymnasium
Gymnasium #1
Gymnasium #2
Gymnasium #3
Auditorium
Cafeteria
Teacher Cafeteria
Main Office 100
Library Media Center 141
Generator Rm.
Stairs 3
Music Dept 164
Guidance 160
Special Svcs 155
Nurse 151
Maint Shop
Pre-K
P.E. Office 185
P.E. Office 183
Girls Team Rm 181
Boys Team Rm 187
Dance Studio
Fitness Center

Appendix C:

Pascack Valley Regional High School District
Chain of Custody

iATL INTERNATIONAL
Asbestos Testing Laboratories

9000 Commerce Parkway, Suite B • Mount Laurel, NJ 08054
Phone: 877-428-4285/856-231-9449 • Fax: 856-231-9818

Chain of Custody

– Environmental Lead –

Contact Information

Client Company:	Health & Safety Services	**Project Number:**	17-0612-13
Office Address:	PO Box 365	**Project Name:**	Pascack Hills H.S.
City, State, Zip:	Berlin, NJ 08009	**Primary Contact:**	Jim Proctor
Fax Number:		**Office Phone:**	
Email Address:	jim@hssenv.com	**Cell Phone:**	609 839-2432

iATL is accredited by the National Lead Laboratory Accreditation Program (NLLAP) to perform analytical testing of environmental samples for lead (Pb). The accreditation is through AIHA-LAP, LLC and several other nationally recognized state programs.

Matrix/Method:

- ☐ Paint by AAS: ASTM D3335-85a, 2009
- ☐ Wipe/Dust by AAS: SW 846: 3050B: 700B, 2010
- ☐ Air by AAS: NIOSH 7082, 1994
- ☐ Soil by AAS: EPA SW 846 (Soil)
- ☒ Water by AAS-GF: ASTM D3559-03D, US EPA 200.9
- ☐ Other Metals (Cd, Zn, Cr) by AAS
- ☐ Toxicity Characteristic Leaching Procedure (TCLP) by AAS: US EPA 1311
- ☐ Other _____

Special Instructions:

_____

_____

Turnaround Time

Preliminary Results Requested Date: _____ (Specific date / time) ☐ Verbal ☒ Email ☐ Fax

☐ 10 Day ☒ 5 Day ☐ 3 Day ☐ 2 Day ☐ 1 Day* ☐ 12 Hour** ☐ 6 Hour** ☐ RUSH**

* End of next business day unless otherwise specified. ** Matrix Dependent. ***Please notify the lab before shipping***

Chain of Custody

Relinquished (Name/Organization):	HSS	Date: 6/16/17	Time: 1130
Received (Name / iATL):	Chris Dan	Date: 6/16/17	Time: 11 30
Sample Login (Name / iATL):	6/16/17	Date:	Time:
Analysis(Name(s) / iATL):	6/23/17	Date:	Time:
QA/QC Review (Name / iATL):	6/23/17	Date:	Time:
Archived / Released: _____ QA/QC InterLAB Use: _____		Date:	Time:

RECEIVED JUN 15 2017

iATL - BV

iATL INTERNATIONAL
ASBESTOS TESTING LABORATORIES

9000 Commerce Parkway, Suite B • Mount Laurel, NJ 08054
Phone: 877-428-4285/856-231-9449 • Fax: 856-231-9818

Chain of Custody

– Environmental Lead –

Contact Information

Client Company:	Health + Safety Services	**Project Number:**	17-0612-13
Office Address:	PO Box 365	**Project Name:**	Pascack Valley H.S.
City, State, Zip:	Berlin, NJ 08009	**Primary Contact:**	Jim Proctor
Fax Number:		**Office Phone:**	
Email Address:	jim@hssenv.com	**Cell Phone:**	609 839-2432

iATL is accredited by the National Lead Laboratory Accreditation Program (NLLAP) to perform analytical testing of environmental samples for lead (Pb). The accreditation is through AIHA-LAP, LLC and several other nationally recognized state programs.

Matrix/Method:

- ☐ Paint by AAS: ASTM D3335-85a, 2009
- ☐ Wipe/Dust by AAS: SW 846: 3050B: 700B, 2010
- ☐ Air by AAS: NIOSH 7082, 1994
- ☐ Soil by AAS: EPA SW 846 (Soil)
- ☒ Water by AAS-GF: ASTM D3559-03D, US EPA 200.9
- ☐ Other Metals (Cd, Zn, Cr) by AAS
- ☐ Toxicity Characteristic Leaching Procedure (TCLP) by AAS: US EPA 1311
- ☐ Other _____

Special Instructions:

_____

_____

Turnaround Time

Preliminary Results Requested Date: _____ (Specific date / time) ☐ Verbal ☒ Email ☐ Fax

☐ 10 Day ☒ 5 Day ☐ 3 Day ☐ 2 Day ☐ 1 Day* ☐ 12 Hour** ☐ 6 Hour** ☐ RUSH**

* End of next business day unless otherwise specified. ** Matrix Dependent. ***Please notify the lab before shipping***

Chain of Custody

Relinquished (Name/Organization):	HSS	Date: 6/16/17	Time: 1125
Received (Name / iATL):	Erin Dean	Date: 6/16/17	Time: 1130
Sample Login (Name / iATL):	NC 6/21/17	Date:	Time:
Analysis(Name(s) / iATL):	JM 6/24/17	Date:	Time:
QA/QC Review (Name / iATL):	DC 6/26/17	Date:	Time:
Archived / Released: _____ QA/QC InterLAB Use:		Date:	Time:

iATL - By

Appendix D:

Pascack Valley Regional High School District
Lead Results

June 30, 2017

Superintendent's Message: "Lead Testing Information"

Dear Parents and Guardians:

The Pascack Valley Regional High School District is committed to providing students with a safe and secure environment. Part of our efforts in doing so includes the periodic testing of water for the presence of lead.

Last year, the district tested all water fixtures and found elevated levels of lead in six water fountains and two sinks. These fixtures were immediately shut down and subsequently replaced with lead filtering fixtures. All of these fixtures have yielded results well below acceptable levels.

Recently, the district retested all water fixtures for lead. Despite being within acceptable levels last year, the following fixtures yielded elevated levels that are above the Environmental Protection Agency's acceptable limit of 15 parts per billion.

Pascack Hills High School:

Cafeteria sink used for washing; water fountains outside Rooms 255, 235, 203 and Girls' Locker Room.

Pascack Valley High School:

Two cafeteria sinks.

Our remediation plan is to replace the affected water fountains with new water coolers / fountains that include lead filtration. (See image of Elkay fountain) In addition, the new fountains will be tested prior to going into service in August.

For additional information regarding lead exposure, please reference the United States Environmental Protection Agency's website. In addition, district results can be found on our website.

Sincerely,

P. Erik Gundersen
Superintendent of Schools
Pascack Valley Regional High School District
Email: egundersen@pascack.org
District website: http://www.pascack.org/ District Twitter: @pvrhsd

Date: June 30, 2017

Buildings and Grounds Department
Pascack Valley Regional High School District
28 West Grand Ave, Suite 2
Montvale, NJ 07645

Dear Pascack Valley Regional High School Community,

Our school system is committed to protecting student, teacher, and staff health. To protect our community and be in compliance with the Department of Education regulations, Pascack Valley Regional H.S. District tested our schools' drinking water for lead.

In accordance with the Department of Education regulations, Pascack Valley Regional High School District will implement immediate remedial measures for any drinking water outlet with a result greater than the action level of 15 µg/l (parts per billion [ppb]). This includes turning off the outlet unless it is determined the location must remain on for non-drinking purposes. In these cases, a "DO NOT DRINK – SAFE FOR HANDWASHING ONLY" sign will be posted.

Results of our Testing

Following instructions given in technical guidance developed by the New Jersey Department of Environmental Protection, we completed a plumbing profile for each of the buildings within Pascack Valley Regional H.S. District. Through this effort, we identified and tested all drinking water and food preparation outlets. Of the 55____ samples taken, all but __7___ tested below the lead action level established by the US Environmental Protection Agency for lead in drinking water (15 µg/l [ppb]).

The table below identifies the drinking water outlets that tested above the 15 µg/l for lead, the actual lead level, and what temporary remedial action Pascack Valley Regional H.S. District has taken to reduce the levels of lead at these locations.

Sample Location	First Draw Result in µg/l (ppb)	Remedial Action
Pascack Valley H.S.		
Kitchen Faucet ID #AA-PV-1-K-FP	28.8	The faucet was shut down and will be replaced
Kitchen Faucet BB-PV-1-K-FP	18.7	The faucet was shut down and will be replaced

Sample Location	First Draw Result in µg/l (ppb)	Remedial Action
Pascack Hills H.S.		
Kitchen Faucet ID #Y-PH-K-F5	24.4	Faucet was shut down and will be replaced
Bubbler ID #I-PH-2-255-B	56.8	Bubbler was shut down and will be replaced during the summer.
Bubbler ID#L-PH-2-235-B	98.7	Bubbler was shut down, and will be replaced during the summer.
Bubbler ID#O-PH-2-203-B	24.4	Bubbler was shut down and will be replaced during the summer.
Bubbler ID#B-PH-1-LR-B	266	Bubbler was shut down and will be replaced during the summer.

Health Effects of Lead

High levels of lead in drinking water can cause health problems. Lead is most dangerous for pregnant women, infants, and children under 6 years of age. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. Exposure to high levels of lead during pregnancy contributes to low birth weight and developmental delays in infants. In young children, lead exposure can lower IQ levels, affect hearing, reduce attention span, and hurt school performance. At *very* high levels, lead can even cause brain damage. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults.

How Lead Enters our Water

Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like groundwater, rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and in building plumbing. These materials include lead-based solder used to join copper pipe, brass, and chrome-plated brass faucets. In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes and other plumbing materials. However, even the lead in plumbing materials meeting these new requirements is subject to corrosion. When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into the drinking water. This means the first water drawn from the tap in the morning *may* contain fairly high levels of lead.

Lead in Drinking Water

Lead in drinking water, although rarely the sole cause of lead poisoning can significantly increase a person's total lead exposure, particularly the exposure of children under the age of 6. EPA estimates that drinking water can make up 20% or more of a person's total exposure to lead.

For More Information

A copy of the test results is available in our central office for inspection by the public, including students, teachers, other school personnel, and parents, and can be viewed between the hours of 8:30 a.m. and 4:00 p.m. and are also available on our website at www.pascack.org. For more information about water quality in our schools, contact Allan Martin at the Building and Grounds Department, 201-358-7020.

For more information on reducing lead exposure around your home and the health effects of lead, visit EPA's Web site at **www.epa.gov/lea**d, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

If you are concerned about lead exposure at this facility or in your home, you may want to ask your health care providers about testing children to determine levels of lead in their blood.

Sincerely,

P. Erik Gundersen
Superintendent of Schools

PVRHSD LEAD IN WATER RESULTS

PASCACK VALLEY HIGH SCHOOL		
SAMPLE LOCATION	**FIRST DRAW RESULT IN UG/L (PPB)**	**REMEDIAL ACTION**
Kitchen Faucet ID #AA-PV-1-K-FP	28.8	The faucet was shut down and will be replaced.
Kitchen Faucet BB-PV-1-K-FP	18.7	The faucet was shut down and will be replaced.

PASCACK HILLS HIGH SCHOOL		
SAMPLE LOCATION	**FIRST DRAW RESULT IN UG/L (PPB)**	**REMEDIAL ACTION**
Kitchen Faucet ID #Y-PH-K-F5	24.4	Faucet was shut down and will be replaced.
Bubbler ID #I-PH-2-255-B	56.8	Bubbler was shut down and will be replaced during the summer.
Bubbler ID #L-PH-2-235-B	98.7	Bubbler was shut down and will be replaced during the summer.
Bubbler ID #O-PH-2-203-B	24.4	Bubbler was shut down and will be replaced during the summer.
Bubbler ID #B-PH-1-LR-B	266	Bubbler was shut down and will be replaced during the summer.

HEALTH & SAFETY SERVICES, Inc.

PO Box 365 • Berlin, NJ 08009 • (856) 452-1311 • info@hssenv.com

Indoor Air Quality • Asbestos & Lead Management • Site Assessments

Hills HS
Laboratory Report

HEALTH & SAFETY SERVICES, Inc.

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Indoor Air Quality • Asbestos & Lead Management • Site Assessments

Hills High School – 25 water samples
Sampling locations that resulted in <2.0 ppb were omitted from the summary table, sampling locations above 15 ppb are highlighted. The complete laboratory report is attached:

Field ID	Concentration µg/L
B-PH	**266**
D-PH	3.40
I-PH	**56.8**
J-PH	4.20
L-PH	**98.7**
O-PH	**24.4**
R-PH	4.50
S-PH	3.80
T-PH	7.80
U-PH	7.80
V-PH	2.10
W-PH	7.10
Y-PH	**36.9**
AA-PH	10.5

If any additional information is required, please contact Health & Safety Services, Inc. at your convenience.

Respectfully,
Health & Safety Services, Inc.

James J. Proctor
President

iATL INTERNATIONAL
ASBESTOS TESTING LABORATORIES

9000 Commerce Parkway, Suite B • Mount Laurel, NJ 08054
Phone: 877-428-4285/856-231-9449 • Fax: 856-231-9818

Sample Log

–Environmental Lead –

Client: Pascack Regional HS, District Project: Pascack Hills H.S.

Sampling Date/Time: 6/16/17 6:24-6:57

Client Sample #	iATL #	Location/ Description	Flow Rate	Start End	Sampling time (min)	Area (ft2) Volume (L)	Results ( )
A-PH	6266544	1-GE-CW			6:24		
B-PH	6266545	1-LR-B			6:26		
C-PH	6266546	1-NG-CW			6:27		
D-PH	6266547	1-169-IM			6:29		
E-PH	6266548	1-169-F			6:30		
F-PH	6266549	1-171-CW			6:31		
I-PH	6266550	2-255-B			6:35		
J-PH	6266551	1-127-B			6:38		
K-PH	6266552	2-227-CW			6:40		
L-PH	6266553	2-235-B			6:41		
M-PH	6266554	1-101-CW			6:43		
N-PH	6266555	1-NUR-F			6:44		
O-PH	6266556	2-203-F			6:45		
P-PH	6266557	1-110-CW			6:46		
Q-PH	6266558	2-213-CW			6:47		

* = *Insufficient Sample Provided to Perform QC Reanalysis (<200mg)*
** = *Insufficient Sample Provided to Analyze (<50mg)* *** = *Matrix / Substrate Interference Possible*
FB = Method Requires the submittal of blank(s). ML = Multi Layered Sample. May result in inconsistent results.
These **preliminary results** are issued by iATL to expedite procedures by clients based upon the above data. iATL assumes that all of the sampling methods and data upon which these results are based, has been accurately supplied by the client. These results may not have been reviewed by the Laboratory Director. Final Certificate of Analysis will follow these preliminary results. The signed COA is to be considered the official results. All EPA, HUD, and NJDEP conditions apply.

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Sample Log

–Environmental Lead –

Client: Pascack Regional H.S. District Project: Pascack Hills H.S.

Sampling Date/Time: 6/16/17 6:24-6:57

Client Sample #	iATL #	Location/ Description	Flow Rate	Start End	Sampling time (min)	Area (ft2) Volume (L)	Results ( )
R-PH	6266559	K-FP			6:49		
S-PH	6266560	K-F1			6:50		
T-PH	6266561	K-F2			6:51		
U-PH	6266562	K-F3			6:51		
V-PH	6266563	K-F4			6:52		
W-PH	6266564	K-FP			6:53		
X-PH	6266565	K-IM			6:55		
Y-PH	6266566	K-F5			6:56		
AA-PH	6266567	K-F6			6:57		
Add'l sample rec'd							
	Z-PH 6266568						
	E.L 6/22/17						
	12:27 Modify						

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** = *Insufficient Sample Provided to Analyze (<50mg)* *** = *Matrix / Substrate Interference Possible*
FB = Method Requires the submittal of blank(s). ML = Multi Layered Sample. May result in inconsistent results.

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9000 Commerce Parkway Suite B
Mt. Laurel, New Jersey 08054
Telephone: 856-231-9449
Email: customerservice@iatl.com

CERTIFICATE OF ANALYSIS

Client: Health & Safety Services, Inc
PO Box 365
Berlin NJ 08009

Client: HEA198

Report Date: 6/23/2017
Report No.: 539375 - Lead Water
Project: Pascack Hills HS
Project No.: 17-0612-13

LEAD WATER SAMPLE ANALYSIS SUMMARY

Lab No.:6266544 **Client No.:**A-PH	**Location:**1-GE-CW	**Result(ppb):**<2.00
Lab No.:6266545 **Client No.:**B-PH	**Location:**1-LR-B	**Result(ppb):**266
Lab No.:6266546 **Client No.:**C-PH	**Location:**1-NG-CW	**Result(ppb):**<2.00
Lab No.:6266547 **Client No.:**D-PH	**Location:**1-169-IM	**Result(ppb):**3.40
Lab No.:6266548 **Client No.:**E-PH	**Location:**1-169-F	**Result(ppb):**<2.00
Lab No.:6266549 **Client No.:**F-PH	**Location:**1-171-CW	**Result(ppb):**<2.00
Lab No.:6266550 **Client No.:**I-PH	**Location:**2-255-B	**Result(ppb):**56.8
Lab No.:6266551 **Client No.:**J-PH	**Location:**1-127-B	**Result(ppb):**4.20
Lab No.:6266552 **Client No.:**K-PH	**Location:**2-227-CW	**Result(ppb):**<2.00
Lab No.:6266553 **Client No.:**L-PH	**Location:**2-235-B	**Result(ppb):**98.7

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/16/2017
Date Analyzed: 06/23/2017
Signature:
Analyst: Chad Shaffer

Approved By:
Frank E. Ehrenfeld, III
Laboratory Director

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CERTIFICATE OF ANALYSIS

Client: Health & Safety Services, Inc
PO Box 365
Berlin NJ 08009

Client: HEA198

Report Date: 6/23/2017
Report No.: 539375 - Lead Water
Project: Pascack Hills HS
Project No.: 17-0612-13

LEAD WATER SAMPLE ANALYSIS SUMMARY

Lab No.:6266554 **Client No.:**M-PH	**Location:**1-101-CW	**Result(ppb):**<2.00
Lab No.:6266555 **Client No.:**N-PH	**Location:**1-NUR-F	**Result(ppb):**<2.00
Lab No.:6266556 **Client No.:**O-PH	**Location:**2-203-B	**Result(ppb):**24.4
Lab No.:6266557 **Client No.:**P-PH	**Location:**1-110-CW	**Result(ppb):**<2.00
Lab No.:6266558 **Client No.:**Q-PH	**Location:**2-213-CW	**Result(ppb):**<2.00
Lab No.:6266559 **Client No.:**R-PH	**Location:**K-FP	**Result(ppb):**4.50
Lab No.:6266560 **Client No.:**S-PH	**Location:**K-F1	**Result(ppb):**3.80
Lab No.:6266561 **Client No.:**T-PH	**Location:**K-F2	**Result(ppb):**7.80
Lab No.:6266562 **Client No.:**U-PH	**Location:**K-F3	**Result(ppb):**7.80
Lab No.:6266563 **Client No.:**V-PH	**Location:**K-F4	**Result(ppb):**2.10

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/16/2017
Date Analyzed: 06/23/2017
Signature:
Analyst: Chad Shaffer

Approved By:
Frank E. Ehrenfeld, III
Laboratory Director

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CERTIFICATE OF ANALYSIS

Client: Health & Safety Services, Inc
PO Box 365
Berlin NJ 08009

Client: HEA198

Report Date: 6/23/2017
Report No.: 539375 - Lead Water
Project: Pascack Hills HS
Project No.: 17-0612-13

LEAD WATER SAMPLE ANALYSIS SUMMARY

Lab No.:6266564 **Client No.:**W-PH	**Location:**K-FP	**Result(ppb):**7.10
Lab No.:6266565 **Client No.:**X-PH	**Location:**K-IM	**Result(ppb):**<2.00
Lab No.:6266566 **Client No.:**Y-PH	**Location:**K-F5	**Result(ppb):**36.9
Lab No.:6266567 **Client No.:**AA-PH	**Location:**K-F6	**Result(ppb):**10.5
Lab No.:6266568 **Client No.:**Z-PH	**Location:**	**Result(ppb):**<2.00

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/16/2017
Date Analyzed: 06/23/2017
Signature:
Analyst: Chad Shaffer

Approved By:
Frank E. Ehrenfeld, III
Laboratory Director

iATL INTERNATIONAL
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Client: Health & Safety Services, Inc
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Client: HEA198

Report Date: 6/23/2017
Report No.: 539375 - Lead Water
Project: Pascack Hills HS
Project No.: 17-0612-13

Appendix to Analytical Report:

Customer Contact: Jim Proctor
Analysis: AAS-GF - ASTM D3559-08D, USEPA 40CFR 141.11B, 2010

This appendix seeks to promote greater understanding of any observations, exceptions, special instructions, or circumstances that the laboratory needs to communicate to the client concerning the above samples. The information below is used to help promote your ability to make the most informed decisions for you and your customers. Please note the following points of contact for any questions you may have.

iATL Customer Service: customerservice@iatl.com
iATL OfficeManager: cdavis@iatl.com
iATL Account Representative: Pete Lesniak
Sample Login Notes: See Batch Sheet Attached
Sample Matrix: Water
Exceptions Noted: See Following Pages

General Terms, Warrants, Limits, Qualifiers:

General information about iATL capabilities and client/laboratory relationships and responsibilities are spelled out in iATL policies that are listed at www.iATL.com and in our Quality Assurance Manual per ISO 17025 standard requirements. The information therein is a representation of iATL definitions and policies for turnaround times, sample submittal, collection media, blank definitions, quantification issues and limit of detection, analytical methods and procedures, sub-contracting policies, results reporting options, fees, terms, and discounts, confidentiality, sample archival and disposal, and data interpretation.

iATL warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted. iATL disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. iATL accepts no legal responsibility for the purpose for which the client uses test results. Any analytical work performed must be governed by our Standard Terms and Conditions. Prices, methods and detection limits may be changed without notification. Please contact your Customer Service Representative for the most current information.

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA LAP LLC, or any agency of local, state or province governments nor of any agency of the U.S. government.

This report shall not be reproduced except in full, without written approval of the laboratory.

Information Pertinent to this Report:

Analysis by AAS Graphite Furnace:
- ASTM D3559-08D, USEPA 40CFR 141.11B, 2010
- USEPA 200.9Pb, AAS-GF, RL <2 ppb/sample
- USEPA SW 846-7000B:7421 - Pb(AAS-GF, RL <2 ppb/sample)

Certification:
- NYS-DOH No. 11021
- NJDEP No. 03863

Regulatory limit for lead in drinking water is 15.0 parts per billion as cited in EPA 40 CFR 141.11 National Primary Drinking Water Regulations, Subpart B: Maximum contaminant levels for inorganic chemicals.

All results are based on the samples as received at the lab. iATL assumes that appropriate sampling methods have been used and that the data upon which these results are based have been accurately supplied by the client.

Sample results are not corrected for contamination by field or analytical blanks.

PPB = Parts per billion. 1 µg/L = 1 ppb MDL = 0.24 PPB Reporting Limit (RL) = 2.0 PPB

Disclaimers / Qualifiers:

There may be some samples in this project that have a "NOTE:" associated with a sample result. We use added disclaimers or qualifiers to inform the client about something that requires further explanation. Here is a complete list with highlighted disclaimers pertinent to this project. For a full explanation of these and other disclaimers, please inquire at **customerservice@iatl.com.**

Water Sample Turbidity greater than 1.0 NTU does not meet Federal and NJ State Primary & Secondary Drinking Water Standards.

HEALTH & SAFETY SERVICES, Inc.

PO Box 365 • Berlin, NJ 08009 • (856) 452-1311 • info@hssenv.com

Indoor Air Quality • Asbestos & Lead Management • Site Assessments

Valley HS
Laboratory Report

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Phone: 877-428-4285/856-231-9449 • Fax: 856-231-9818

Sample Log

–Environmental Lead –

Client: Pascack Regional H.S. District Project: Pascack Valley H.S.

Sampling Date/Time: 6/16/17 7:30-8:08

Client Sample #	iATL #	Location/ Description	Flow Rate	Start / End	Sampling time (min)	Area (ft2) Volume (L)	Results ( )
P-PV	6266584	1-128-CW			7:58		
Q-PV	6266585	1-KS-CW			8:00	*Only 1/2 Full	
R-PV	6266586	1-K-KC			8:01		
S-PV	6266587	1-K-KC			8:01		
T-PV	6266588	1-C-CW			8:02		
U-PV	6266589	1-K-FP			8:03		
V-PV	6266590	1-K-KP			8:03		
W-PV	6266591	1-K-KC			8:04		
X-PV	6266592	1-K-KC			8:05		
Y-PV	6266593	1-K-FP			8:06		
Z-PV	6266594	1-K-CM			8:06		
AA-PV	6266595	1-K-FP			8:07		Acidified 6/22/17 V.P. 11:30AM
BB-PV	6266596	1-K-FP			8:07		
CC-PV	6266597	1-K-FP			8:07		
DD-PV	6266598	1-WC-F			8:08		

* = *Insufficient Sample Provided to Perform QC Reanalysis (<200mg)*
** = *Insufficient Sample Provided to Analyze (<50mg)* *** = *Matrix / Substrate Interference Possible*
FB = Method Requires the submittal of blank(s). ML = Multi Layered Sample. May result in inconsistent results.
These preliminary results are issued by iATL to expedite procedures by clients based upon the above data. iATL assumes that all of the sampling methods and data upon which these results are based, has been accurately supplied by the client. These results may not have been reviewed by the Laboratory Director. Final Certificate of Analysis will follow these preliminary results. The signed COA is to be considered the official results. All EPA, HUD, and NJDEP conditions apply.

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Phone: 877-428-4285/856-231-9449 • Fax: 856-231-9818

Sample Log

–Environmental Lead –

Client: Pascack Regional HS District Project: Pascack Valley H.S.

Sampling Date/Time: 6/16/17 7:30-8:08

Client Sample #	iATL #	Location/ Description	Flow Rate	Start End	Sampling time (min)	Area (ft2) Volume (L)	Results ( )
Boiler	6266569	Point of Entry Boiler Room			7:30		
A-PV	6266570	1-ME-CW			7:33		
B-PV	6266571	2-229-CW			7:34		
C-PV	6266572	1-162-CW			7:35		
D-PV	6266573	1-165-CW			7:37		
E-PV	6266574	1-157-CW			7:39		
F-PV	6266575	1-144-CW			7:40		
G-PV	6266576	2-213-CW			7:43		
I-PV	6266577	1-177-IM			7:47	* only half full	
J-PV	6266578	1-177-F			7:48		
K-PV	6266579	1-179-CW			7:50		
L-PV	6266580	1-182-CW			7:51		
M-PV	6266581	1-183R-CW			7:52		
N-PV	6266582	1-183L-CW			7:53		
O-PV	6266583	1-141-CW			7:54		

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** = *Insufficient Sample Provided to Analyze (<50mg)* *** = *Matrix / Substrate Interference Possible*
FB = Method Requires the submittal of blank(s). ML = Multi Layered Sample. May result in inconsistent results.
These preliminary results are issued by iATL to expedite procedures by clients based upon the above data. iATL assumes that all of the sampling methods and data upon which these results are based, has been accurately supplied by the client. These results may not have been reviewed by the Laboratory Director. Final Certificate of Analysis will follow these preliminary results. The signed COA is to be considered the official results. All EPA, HUD, and NJDEP conditions apply.

iATL INTERNATIONAL
ASBESTOS TESTING LABORATORIES

9000 Commerce Parkway Suite B
Mt. Laurel, New Jersey 08054
Telephone: 856-231-9449
Email: customerservice@iatl.com

CERTIFICATE OF ANALYSIS

Client: Health & Safety Services, Inc
PO Box 365
Berlin NJ 08009

Client: HEA198

Report Date: 6/24/2017
Report No.: 539376 - Lead Water
Project: Pascack Valley HS
Project No.: 17-0612-13

LEAD WATER SAMPLE ANALYSIS SUMMARY

Lab No.:6266569 **Client No.:**Boiler	**Location:**Point of Entry Boiler Room	**Result(ppb):**<2.00
Lab No.:6266570 **Client No.:**A-PV	**Location:**I-ME-CW	**Result(ppb):**<2.00
Lab No.:6266571 **Client No.:**B-PV	**Location:**2-229-CW	**Result(ppb):**<2.00
Lab No.:6266572 **Client No.:**C-PV	**Location:**I-162-CW	**Result(ppb):**<2.00
Lab No.:6266573 **Client No.:**D-PV	**Location:**I-165-CW	**Result(ppb):**<2.00
Lab No.:6266574 **Client No.:**E-PV	**Location:**I-151-CW	**Result(ppb):**<2.00
Lab No.:6266575 **Client No.:**F-PV	**Location:**I-144-CW	**Result(ppb):**<2.00
Lab No.:6266576 **Client No.:**G-PV	**Location:**2-213-CW	**Result(ppb):**<2.00
Lab No.:6266577 **Client No.:**I-PV	**Location:**I-177-IM	**Result(ppb):**<2.00
Lab No.:6266578 **Client No.:**J-PV	**Location:**I-177-F	**Result(ppb):**<2.00
Lab No.:6266579 **Client No.:**K-PV	**Location:**I-179-CW	**Result(ppb):**<2.00

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/20/2017
Date Analyzed: 06/24/2017
Signature:
Analyst: Chad Shaffer

Approved By:
Frank E. Ehrenfeld, III
Laboratory Director

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LEAD WATER SAMPLE ANALYSIS SUMMARY

Lab No.:6266580 **Client No.:**L-PV	**Location:**I-182-CW	**Result(ppb):**<2.00
Lab No.:6266581 **Client No.:**M-PV	**Location:**1-183R-CW	**Result(ppb):**<2.00
Lab No.:6266582 **Client No.:**N-PV	**Location:**I-183L-CW	**Result(ppb):**<2.00
Lab No.:6266583 **Client No.:**O-PV	**Location:**I-141-CW	**Result(ppb):**<2.00
Lab No.:6266584 **Client No.:**P-PV	**Location:**I-128-CW	**Result(ppb):**<2.00
Lab No.:6266585 **Client No.:**Q-PV	**Location:**I-KS-CW	**Result(ppb):**<2.00
Lab No.:6266586 **Client No.:**R-PV	**Location:**I-K-KC	**Result(ppb):**11.4
Lab No.:6266587 **Client No.:**S-PV	**Location:**I-K-KC	**Result(ppb):**2.29
Lab No.:6266588 **Client No.:**T-PV	**Location:**I-C-CW	**Result(ppb):**3.57
Lab No.:6266589 **Client No.:**U-PV	**Location:**I-K-FP	**Result(ppb):**6.79
Lab No.:6266590 **Client No.:**V-PV	**Location:**I-K-KP	**Result(ppb):**<2.00

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/20/2017
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Signature:
Analyst: Chad Shaffer

Approved By:
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Laboratory Director

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LEAD WATER SAMPLE ANALYSIS SUMMARY

Lab No.:6266591 **Client No.:**W-PV	**Location:**I-K-KC	**Result(ppb):**7.21
Lab No.:6266592 **Client No.:**X-PV	**Location:**I-K-KC	**Result(ppb):**8.89
Lab No.:6266593 **Client No.:**Y-PV	**Location:**I-K-FP	**Result(ppb):**28.8
Lab No.:6266594 **Client No.:**Z-PV	**Location:**I-K-CM	**Result(ppb):**10.3
Lab No.:6266595 **Client No.:**AA-PV	**Location:**I-K-FP	**Result(ppb):**5.35
Lab No.:6266596 **Client No.:**BB-PV	**Location:**I-K-FP	**Result(ppb):**18.7
Lab No.:6266597 **Client No.:**CC-PV	**Location:**I-K-FP	**Result(ppb):**8.72
Lab No.:6266598 **Client No.:**DD-PV	**Location:**I-WC-F	**Result(ppb):**6.43

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 6/20/2017
Date Analyzed: 06/24/2017
Signature:
Analyst: Chad Shaffer

Approved By:
Frank E. Ehrenfeld, III
Laboratory Director

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Appendix to Analytical Report:

Customer Contact: Jim Proctor
Analysis: AAS-GF - ASTM D3559-08D, USEPA 40CFR 141.11B, 2010

This appendix seeks to promote greater understanding of any observations, exceptions, special instructions, or circumstances that the laboratory needs to communicate to the client concerning the above samples. The information below is used to help promote your ability to make the most informed decisions for you and your customers. Please note the following points of contact for any questions you may have.

iATL Customer Service: customerservice@iatl.com
iATL OfficeManager: cdavis@iatl.com
iATL Account Representative: Pete Lesniak
Sample Login Notes: See Batch Sheet Attached
Sample Matrix: Water
Exceptions Noted: See Following Pages

General Terms, Warrants, Limits, Qualifiers:

General information about iATL capabilities and client/laboratory relationships and responsibilities are spelled out in iATL policies that are listed at www.iATL.com and in our Quality Assurance Manual per ISO 17025 standard requirements. The information therein is a representation of iATL definitions and policies for turnaround times, sample submittal, collection media, blank definitions, quantification issues and limit of detection, analytical methods and procedures, sub-contracting policies, results reporting options, fees, terms, and discounts, confidentiality, sample archival and disposal, and data interpretation.

iATL warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted. iATL disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. iATL accepts no legal responsibility for the purpose for which the client uses test results. Any analytical work performed must be governed by our Standard Terms and Conditions. Prices, methods and detection limits may be changed without notification. Please contact your Customer Service Representative for the most current information.

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Information Pertinent to this Report:

Analysis by AAS Graphite Furnace:
- ASTM D3559-08D, USEPA 40CFR 141.11B, 2010
- USEPA 200.9Pb, AAS-GF, RL <2 ppb/sample
- USEPA SW 846-7000B:7421 - Pb(AAS-GF, RL <2 ppb/sample)

Certification:
- NYS-DOH No. 11021
- NJDEP No. 03863

Regulatory limit for lead in drinking water is 15.0 parts per billion as cited in EPA 40 CFR 141.11 National Primary Drinking Water Regulations, Subpart B: Maximum contaminant levels for inorganic chemicals.

All results are based on the samples as received at the lab. iATL assumes that appropriate sampling methods have been used and that the data upon which these results are based have been accurately supplied by the client.

Sample results are not corrected for contamination by field or analytical blanks.

PPB = Parts per billion. 1 µg/L = 1 ppb MDL = 0.24 PPB Reporting Limit (RL) = 2.0 PPB

Disclaimers / Qualifiers:

There may be some samples in this project that have a "NOTE:" associated with a sample result. We use added disclaimers or qualifiers to inform the client about something that requires further explanation. Here is a complete list with highlighted disclaimers pertinent to this project. For a full explanation of these and other disclaimers, please inquire at customerservice@iatl.com.

Water Sample Turbidity greater than 1.0 NTU does not meet Federal and NJ State Primary & Secondary Drinking Water Standards.