

**Quality Assurance Project Plan (QAPP)
For
Drinking Water Sampling
of Lead in School Drinking Water Outlets
Passaic County Technical Institute**

Approvals

School District Representatives:

Supervisor: Sal Antonello Sal Antonello 4/9/2020
Print Name Signature Date

Third Party Sampling Firm: Whitman
Name of Firm

Brett Iwicki _____
Print Name Signature Date

Laboratory: IAL
Name of Laboratory

Laboratory Manager: _____
Print Name Signature Date

Laboratory QA Officer: _____
Print Name Signature Date

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Supervisor: Sal Antonello _____
Print Name Signature Date

Third Party Sampling Firm: Whitman
Name of Firm

Brett Iwicki _____ 4/8/2020
Print Name Signature Date

Laboratory: IAL
Name of Laboratory

Laboratory Manager: Michael Leftin _____ 5/13/2020
Print Name Signature Date

Laboratory QA Officer: Lauren Jenkins _____ 5/13/2020
Print Name Signature Date

Individual School Project Officers (Project Officers)

School	Name	Title	Signature	Date
Passaic County Technical Institute	Phone:			
	Phone:			
	Phone:			
	Phone:			
	Phone:			
	Phone:			
	Phone:			
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Add additional sheets as necessary.

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1. Objective & Goals/Background

Key:

Quality Assurance Project Plan - QAPP

US Environmental Protection Agency - USEPA

School District Lead Water Testing Sampling Plan - Sampling Plan

School District Project Manager - Project Manager

Individual School Project Officer - Project Officer

1.1 Objective and Goals

A Quality Assurance Project Plan (QAPP) 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 those drinking water outlets identified as exceeding the US Environmental Protection Agency (USEPA) drinking water lead action level of 15 micrograms per liter ($\mu\text{g/L}$).

For the purposes of compliance, any concentration greater than 15 $\mu\text{g/L}$ (as defined as greater than or equal to 15.5 $\mu\text{g/L}$) is considered to exceed the lead action level.

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

Follow-up sampling will also be covered within this QAPP and the Sampling Plan. It may be necessary to collect follow-up flush samples at selected drinking water outlets after flushing those outlets (allowing the water to flow) for 30 seconds. (An exception to the 30 second follow-up flushed sample is for a water cooler, which requires a 15-minute follow-up flushing timeframe).

Only cold water samples should be collected for lead sampling. If warm water is collected for lead sampling, document that the same is not cold on the field log book and the chain of custody and document the justification for not collecting a cold water sample. For example, the faucet only produces warm water and it is used for drinking and/or food preparation.

The analytical results and field data will be used by the School District Project Manager (Project Manager) and the District (See Section 2.2) to determine whether drinking water distributed from drinking water outlets such as water fountains (bubblers), water coolers,

faucets, and food preparation areas have concentrations of lead that exceed 15 µg/L. If an initial first draw or follow-up flush 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 if it is 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.

Starting in April 1994 the USEPA began issuing guidance documents to assist municipalities in meeting the requirements of the Lead Contamination and Control Act (LCCA). In 2005, USEPA replaced one of those documents, *Lead in Drinking Water in Schools and Non-Residential Buildings* (EPA 812-B-94-002) with *3Ts for Reducing Lead in Drinking Water in Schools* (EPA 816-B-05-008). This 2005 document was developed primarily for school officials involved in the implementation of programs and policies aimed at reducing children's exposure to lead in drinking water in schools. (This document was later reissued in 2006 to include several additions and corrections.) This QAPP, while primarily developed based on the USEPA 3Ts document, differs from the 3Ts document on several issues. This QAPP's requirements take precedence.

2. Project/Task Organization

Key:

School District Program Manager - Program Manager

School District Project Manager - Project Manager

Individual School Project Officer - Project Officer

Laboratory Report & Data Package - LRDP

Laboratory Quality Assurance Officer - LQAO

2.1 School District Program Manager (Program Manager)

The Program Manager is the overall authority in the execution of the District's lead sampling program. He/she is responsible for the initial notification to the District of the sampling program, obtaining funds for sampling, 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.

2.2 School District Project Manager (Project Manager)

The Project Manager reports to the Program 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).

The Project Manager's responsibilities include:

- Preparing the District's QAPP
- Managing the Sampling Plan and QAPP
- Oversight of Project Officers to ensure that they adhere to the Sampling Plan procedures and the QAPP
- Purchasing of equipment needed for lead sampling
- Coordination with Laboratories certified by the NJDEP Office of Quality Assurance for analysis of lead in drinking water
- Coordination with Project Officers to establish sampling schedules
- Ensuring properly signed QAPPs are in place prior to initiation of sampling
- Verifying 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 Report & Data Package (LRDP) received from Laboratory
- Review of Final Project Reports prepared by Project Officers
- Identifying limitations in the use of any laboratory data due to information provided in the accompanying School Field Sampling Summary Report
- Maintenance of the original signed QAPP(s)
- Maintenance of documents, reports and records listed in Section 14 of the QAPP
 - LRDP
 - Copy of Field Sampling Summary Report with copies of field log books (defined in Section 2.3 of this QAPP), field Walk-Through reports including Attachments B, C, D, E, and F of the 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 (copies)
 - Agreement/contract with Laboratory that includes sampling, analysis,

- reporting and payment details
- Receipts and invoices (originals or copies)

2.3 Individual School Project Officer(s) (Project Officer)

The Project Officer's responsibilities include:

- General project oversight for assigned school(s)
- Generating a field log book for each assigned school. Document field activities including any changes to procedures outlined in the Sampling Plan or QAPP
- Ensuring 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).
- Preparation of labels for drinking water outlets to be sampled
- Preparation for Walk-Through including acquisition of School Floor Plan
- Participation in school Walk-Through
- Ensuring proper completion of Walk-Through documentation including identification of all drinking water outlets on Floor Plan and Drinking Water Outlet Inventory using the coding detailed in the Sampling Plan (Attachment C of Sampling Plan)
- Supervision of field activities such as flushing (if required) and locking school prior to sampling, and sample collection
- Identification of drinking water outlets to be flushed and attach flush tag
- Ensuring 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
- Ensuring that all drinking water outlets to be sampled prior to sampling event are labeled
- Ensuring that any drinking water outlets deviating from normal usage had been flushed
- Removal of flush tags from drinking water outlet(s) once sampling is completed
- Ensuring that 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 the School District Lead Drinking Water Testing Sampling Plan (Appendix A)
- Verifying 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-Through 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
- Ensuring that samples are delivered to laboratory within the time period specified by the certified laboratory
- Ensuring that the sampling results are received from the Laboratory within the agreed timeframe

2.4 Laboratory Manager

The Laboratory Manager is responsible for:

- Ensuring that the Laboratory is certified by the NJDEP Office of Quality Assurance for analysis of lead in drinking water
- Ensuring that the analytical requirements of the QAPP are followed
- Ensuring that sample collection requirements were followed if the Field Sampler is employed by the Laboratory
- Overseeing the laboratory analyses performed in the Laboratory
- Ensuring that the LQAO meets their requirements within the QAPP
- Providing the LRDP to the Project Manager and Project Officer within the agreed timeframe
- Immediately notifying the Project Officer if lead is detected over the reporting limit in the field reagent blank

2.5 Laboratory's Quality Assurance Officer (LQAO)

The LQAO is responsible for reviewing the QAPP and resolving any Quality Control (QC) and Quality Assurance (QA) issues that may arise during the project. The LQAO should not be conducting the actual measurement operations for the given analytical batch but rather have experience and knowledge of the analytical processes employed. Issues that may compromise the analysis of the samples must be immediately communicated to the Laboratory Manager, Project Manager and Project Officer. Any result reported not meeting the acceptance criteria for the method must be indicated as such and therefore considered "qualified" data. The symbols used for any qualified data must be explained in the Laboratory Report or within the LRDP.

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 of lead using USEPA drinking water methods. These methods are listed in Section 8.1 of this QAPP.

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

4. Project 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) shall also be sampled. The custodian sink faucet may be sampled if 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 an initial first draw sample collection in addition to, as appropriate, a follow-up flush sample collection at the drinking water outlets specified in the Sampling Plan. The Sampling Team will consist of the Project Officer and the Field Sampler. The NJ Certified Laboratory specified in the QAPP will perform the analysis for lead.

5. Lead Data Quality Objectives and Criteria for Measurement

Key:

Quality Control - QC

Field Reagent Blank - FRB

5.1 Precision

Precision is a measure of the ability to reproduce analytical results and is usually assessed by analyzing laboratory duplicates and calculating the relative percent difference of the sample results. The lower the relative percent difference the greater

the precision of the laboratory procedures. A Quality Control Sample, which is typically required as an initial demonstration of capability and quarterly thereafter, is a check on laboratory and instrument performance. Duplicate Quality Control Samples must be analyzed within the analytical batch as a requirement of this QAPP. This is to assess precision where the relative percent difference must be less than or equal to 20%.

5.2 Bias

Bias is a measure of a systematic or inherent error that can occur in the sample collection, sample handling and/or sample analysis processes. In order to identify any bias due to contamination of the water sample from lead sources present in the sampling environment, a field reagent blank (FRB) must be collected at each school building being sampled. While the collection of a FRB is not required in any of the approved analytical methods for analysis of lead, it is required with this QAPP.

The information provided by the FRB can be used to determine whether the field or sample transporting procedures and environmental effects have contributed to contamination of the sample. Lead is found in ambient soil and dust due to past use of leaded gasoline, paint and mortar. The presence of lead in the FRB would most likely be due to these types of background contamination.

5.3 Representativeness

The sampling effort is designed to identify all drinking water outlets in a school, where there is a potential for water consumption 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). Drinking water fountains (bubblers), water coolers, food preparation outlets and other potential consumption outlets, such as those in the special education classrooms, the medical office and teachers' lounge are to be sampled.

5.4 Comparability

Comparability is the degree to which data can be compared directly to similar studies. This is accomplished by maintaining uniformity with collection procedures, analyses and reporting. The approved analytical methods for lead analysis in drinking water listed in Section 8.1 of this QAPP are referenced in the federal Safe Drinking Water Regulations at 40 CFR 141.86 and 40 CFR 141 Appendix A to Subpart C. Use of these methods allows for the comparison of data to USEPA's drinking water lead action level of lead concentrations greater than 15 µg/L.

Initial first draw and the follow-up flush samples analytical results from the same drinking water outlets will be compared to assist in determining the source of lead contamination. Appropriate corrective measures must then be taken by the District.

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 attached to this QAPP.

One hundred percent (100%) of collected initial first draw samples will be analyzed and reported. If Option 1 of the Sample Collection Method Protocol is used (See Section 7.2), 100% of the follow-up flush samples will be analyzed and reported.

5.6 Sensitivity

The Laboratory must use a reporting limit (RL) less than or equal to 2 µg/L for lead in drinking water samples. This RL is lower than the regulatory Practical Quantitation Level (PQL) for lead of 0.005 mg/L (5 µg/L) from 40 CFR141 Subpart I of the National Primary Drinking Water Contaminant Regulations. The reporting limit of 2 µg/L, required in this QAPP, is achievable with any of the approved USEPA methods listed in Section 8.1 of this QAPP.

6. Secondary Data

Any previous lead data collected at the school would be considered secondary data.

7. Field Monitoring Requirements

Key:

Field Reagent Blank - FRB

Chain of Custody - COC

Sampling may take place either in the morning hours before the schools are open and accessible to the staff and students or on weekends when school activities are not scheduled. This will minimize the potential for people in the building to use water prior to or during the sampling event. While sampling is underway prohibit any persons other than the Sampling Team to enter the building in order to ensure that toilets or water outlets are not being used.

NOTE: If it is determined that the stagnation period of 8 to 48 hours had been compromised, the sampling event must be postponed and rescheduled.

7.1 Monitoring Process Design

The monitoring or sampling design is detailed in the Sampling Plan (Appendix A). Although the Sampling Plan and QAPP are based in part on the 3T's Guidance for

Reducing Lead in Drinking Water in Schools: *Revised Technical Guidance, December 2005; Errata to 3Ts, October 2006*, this QAPP and Sampling Plan take precedence over the EPA 3Ts document.

7.2 Monitoring Methods

Equipment and supplies that will be needed to perform the sample collection are ASTM Type I reagent-grade water for the field reagent blank (FRB), powder-free latex (preferably non-colored) or nitrile disposable gloves, pre-cleaned, plastic, wide-mouth 250 mL single use rigid sample containers, chain of custody (COC) forms, indelible ink/marker, waterproof sample labels, a timing device and at least one cooler for each school's water samples. An example of a COC is found in Appendix B. The Laboratory's COC may be used provided that all required information is included. Documentation associated with the pre-cleaned sample bottles must be maintained by the Laboratory and made available upon request.

The samples must be preserved with concentrated nitric acid to a pH of less than 2 Standard Units (S.U.). The concentrated nitric acid may be added to the water samples after receipt at the Laboratory or the Laboratory may elect to add the preservative to the empty sample bottles prior to the sampling event. The pH must be measured and recorded upon receipt at the laboratory and must include date and time of measurement. Preservation status of the samples must be annotated on the COC and must indicate whether preservative was added prior to sample collection, during sample collection or after receipt at the laboratory.

NOTE: All initial first draw samples and follow up flush samples must be acidified to a **pH of less than 2 S.U.** within 14 days of sample collection. If the samples had not been preserved with concentrated nitric acid to a pH of less than 2 within 14 days of sample collection, the analysis of the samples must not proceed. The Laboratory Manager must notify the Project Officer and Project Manager immediately if the samples cannot be analyzed.

Safety glasses should be worn if nitric acid (preservative) has been added to the sample bottles prior to sample collection.

Each school will have a separate sample cooler which will contain the FRB and the other water samples collected in the school. Samples will be transported by the Sampling Team, Laboratory, or appropriate representative of the Laboratory.

Collection of drinking water samples for lead analysis is conducted as a two-step process in order to identify the source of any lead contamination. The first step is collection of an initial first draw and the second step is the collection of a follow-up flush sample. As explained in detail in the Sampling Plan there are two Sample Collection Method protocols from which the District may follow:

Option 1- Sample Collection for First Draw and Follow-up Flush Sampling

conducted on Different Days

Option 2- Sample Collection for First Draw and Follow-up Flush Sampling Conducted on Same Day

The Sampling Plan describes each option in detail.

NOTE: If a District uses Option 2, the District may request that the Laboratory analyze the initial first draw samples first and hold the analysis of the follow-up flush samples until the results of the initial first draw samples are obtained. The District may instruct the Laboratory to analyze only those follow-up flush samples collected at locations where the initial first draw sample results exceed 15 µg/L or a lower threshold specified by the District. For example, the District may request analysis of all follow-up flush samples where the initial first draw results are 10 µg/L or higher.

A District must determine if a Laboratory can accommodate this additional step of prioritizing the analysis of initial first draw samples. It is recommended that the Laboratory Manager initial this paragraph if prioritizing the analysis of the initial first draw samples is agreed upon by both District and Laboratory.

7.3 Field Quality Control

The samples must be collected in unused, pre-cleaned 250 mL, rigid, wide-mouth plastic bottles. Sample containers are not to be reused. Documentation associated with the pre-cleaned sample bottles must be maintained by the Laboratory and made available upon request.

A FRB must be collected for each school building if the school consists of more than one building being tested for lead. Prior to the sampling event, the Sampler must obtain at least 250 mL of ASTM Type I reagent-grade water for each school building being sampled during the sampling event. The ASTM Type I reagent grade water is usually provided by the Laboratory. In the school building and preferably prior to the first sample collected, the ASTM Type I reagent-grade water will be transferred into a 250 mL pre-cleaned single use plastic sample bottle which will be identified and labeled as the FRB sample for the school building being sampled.

8. Analytical Requirements

Key:

Laboratory Report & Data Package - LRDP
Quality Control - QC

8.1 Analytical Methods

The Laboratory 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 lead using one of these methods. They must be capable of reporting lead to a reporting limit of less than or equal to 2 µg/L.

For the purposes of this QAPP, the Table below summarizes the main analytical requirements follows:

Analyte	Analytical Method	Sample Matrix	Lead Action 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) initial first draw sample	2 µg/L (ppb)

Once samples are acidified with concentrated nitric acid to a pH of less than 2 S.U., the samples must sit for 16 hours, after which the pH measurement is repeated. The pH must be less than 2 S.U. before proceeding with the analysis.

The turbidity of samples must also be measured and recorded regardless of the analytical method being used for lead analysis. If the turbidity of the sample is greater than 1 NTU, the sample must be digested prior to analysis. Samples digested prior to analysis must be indicated in the Microsoft Excel spreadsheet required with the Lead Laboratory Report & Data Package (LRDP). The turbidity measurements must be provided to the District upon request.

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 on the Microsoft Excel Spreadsheet of the LRDP for those samples requiring dilution.

8.2 Analytical Quality Control

The approved analytical methods found in Section 8.1 include protocols for the analysis of Quality Control Samples (QCS) with each analytical batch of samples, generally defined as a maximum of twenty samples. All QCS results must be assessed and evaluated on an on-going basis. Acceptance criteria are those specified within the analytical method used.

Specific information regarding acceptance criteria and corrective actions is documented in the Laboratory's Standard Operating Procedure (SOP) for the approved drinking water method(s) used for the lead analysis of the drinking water samples. Laboratories may elect

to develop an SOP specific for the analysis of lead in drinking water for samples collected in New Jersey schools that contains the requirements of this QAPP.

If any sample result(s) is qualified, this must be clearly indicated on the Laboratory Report and included in the LRDP. The Project Manager must be consulted in order to determine how to address the qualified results.

9. Sample Handling and Custody Requirements

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 (Appendix B or laboratory 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 – pre-cleaned	Reagent Grade Concentrated Nitric Acid (HNO ₃) pH < 2	6 months

Note 1. Sample preservation can be performed at the Laboratory upon receipt. Any water sample not acidified with concentrated nitric acid to a pH of 2 S.U. within 14 days of sample collection must not be analyzed.

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 of 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 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

Sample containers are pre-cleaned, plastic, wide-mouth 250 mL single use rigid sample containers. Sample containers are not to be reused. Documentation for the pre-cleaned sample bottles must be available upon request. Sample gloves are to be powder-free latex (preferably non-colored) or nitrile disposable gloves.

11. Data Management

Key:

Field Reagent Blank - FRB

Laboratory Report & Data Package - LRDP

The Laboratory will immediately notify the Project Manager and Project Officer of any validated laboratory result that exceeds the action level for lead in drinking water of 15 µg/L (defined as greater than or equal to 15.5 µg/L) and a FRB with a lead result greater than the RL. The Laboratory will provide the analytical results in micrograms per liter (µg/L) or ppb (parts per billion) and to at least three (3) significant figures (i.e. 19.6 µg/L or 204 µg/L).

The Laboratory will provide a final electronic copy of the Lead Laboratory Report & Data Package (LRDP) for each school that will consist of: 1) cover sheet with the school name and the laboratory report which includes the analytical results with a description of all qualifiers referenced in the laboratory reports in PDF format, 2) the chain of custody in PDF format and 3) a Microsoft Excel spreadsheet that includes the information outlined in the Microsoft Excel spreadsheet template provided in Appendix C. Information required in each field of the spreadsheet includes, but is not limited to, the Field ID (Sample Location ID Code), the Laboratory Sample ID, the Laboratory Name and NJ Laboratory Certification ID number, whether the sample was flushed, the date and time of collection and analysis, the analytical method, the analytical result in µg/L or ppb, the reporting limit in µg/L or ppb, and whether the sample was diluted or digested and any other qualifiers.

The LRDP must include explanations of any 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.

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 log book and evaluated to determine if there will be any impact to the data. This information must be included 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

Key:

Laboratory Quality Assurance Officer - LQAO
Laboratory Report & Data Package - LRDP

13.1 Data Review, Verification and Validation

Data review of all laboratory generated data is performed by the Laboratory Quality Assurance Officer (LQAO). 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 utilized for the analysis for lead in the drinking water samples.

The Project Officer will evaluate the analytical results by referencing the School Field Sampling Summary Reports in order to determine if any field observations may have contributed to lower or higher analytical results.

The Project Officer and Project Manager will review the Laboratory Report & Data Package (LRDP) and identify any limitations on the use of the data and include these limitations in the Final Project Report. Any limitations on the use of data will be included in the Final Project Report.

13.2 Reconciliation with User Requirements

Providing that the Field Sampling Summary Report and LRDR Package 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:	<u>Individual School Project Officer</u>	<u>School District Project Manager</u>	<u>School District Program Manager</u>
QAPP	Copy	X	Copy
Field Walk-Through 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 Report & Data Package	X	Copy	Copy
Final Project Report	Copy	X	Copy

Appendix A
School's Lead Drinking Water Testing Sampling Plan

Passaic County Technical Institute
LEAD DRINKING WATER TESTING
SAMPLING PLAN

4/8/2020

Project Manager – Sal Antonello, Supervisor

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1. INTRODUCTION

This Lead Drinking Water Testing Sampling Plan (Sampling Plan) was developed by the Passaic County Technical Institute, (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)

Passaic County Technical Institute
Sal Antoniello, Supervisor
45 Reinhardt Road, Wayne, NJ 07470

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)

Passaic County Technical Institute
Brett Iwicki, Project Manager
Whitman
7 Pleasant Hill Road, Cranbury, NJ 08512

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 and manage the District's specific Quality Assurance Project Plan (QAPP) and Sampling Plan;
- 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 Report & Data Package (LRDP) 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, including:
 - Laboratory Report & Data Package (LRDP)
 - 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,

- Flush tags, and
- Copy of Final Project Report; and
- 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, and
 - 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 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 field log book and supporting documentation shall be kept for each school. The contents of the field 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.

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 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; and
- Locations of any electrical wires grounded to water pipes.

5.2 Filter Inventory (If Applicable)

A Filter Inventory (Attachment D) if applicable 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).

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 water outlets will be observed for abundant leaks as this could impact the water stagnation time and all drinking water and food preparation outlets to be sampled will be labeled 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 according to item 9 of the Plumbing Profile (Attachment B) as being “Temporarily Out of Service”.

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 Entry¹
- 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 add additional codes as needed):

KC = Kitchen Outlet, Cold

FP= Food Preparation Sink

¹Point of entry is the point at which the service line enters into the building.

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 (Drinking Water Outlet 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 and/or cleaned 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 Attachment H.iii School Wide Flushing Procedure. For additional details see the USEPA's "3Ts For Reducing Lead in Drinking Water in Schools" revised October 2006 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 designated for sampling (previously identified in Attachment C) will be labeled with a unique Sample Location ID Code in indelible marker on the underside of the sampling fixture. This unique code assigned to each drinking water outlet within the school will also be used for the identification of the outlet on the Floor Plan, the Drinking Water Outlet Inventory, the sampling chain of custodies and if applicable, the Filter Inventory, the Flushing Log, the Flush Tag and the Follow- up Sampling List. The Sample Location ID Code will allow the District to identify each drinking water outlet within the school for future sampling, remedial measures, and operational and maintenance issues.
- 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 Floor Plan the drinking water outlet closest to the point of entry as the first sampling location, then identify the next closest drinking water outlet as the second sampling location. Continue moving downstream from the point of entry until the outlet farthest away is identified as being sampled last. Collecting samples by moving downstream minimizes the chance that a sampling location will be flushed by an upstream fixture. Therefore, all sampling will begin at the outlet closest to the point of entry and continue to the furthest outlet thereby allowing the water to remain 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, the initial first draw samples are collected to identify the location of outlets providing water with elevated lead levels. In Step 2, the follow-up flush samples are collected 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.

Follow-up flush samples are to be collected from locations where the results of the initial first draw samples exceed the action level. Schools may wish to collect both initial first draw and follow-up flush samples at the same time rather than conduct the two steps of the sampling on different days. 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.

Sample Collection for First Draw and Follow-up Flush Sampling Conducted on Different Days

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 on Attachment C following the sampling sequence described in 8.2. 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 and metered sinks, 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), labeled 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. Follow-up flush samples will be collected from a cold water outlet at each location identified on Attachment H.vii following the sampling sequence described in 8.2.
7. When collection the follow-up flush sample, 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, do not collect the follow-up flush sample until all other follow-up flush samples have been collected. After all follow-up flush samples have been collected, return to the water cooler with a chiller unit closest to the POE and then move outward. Allow the water to run for 15 minutes prior to collecting a flushed sample in a pre-cleaned 250 mL container.

8. 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 the chain of custody (e.g. MM-DW-2FL-01 and MM-DW-2FL-01 FLUSH)

Additional Sampling Event

Upon receiving the results of the initial first draw and follow-up flush samples at all outlets, the District will conduct additional sampling events for the following situations: if a required sampling location had not been sampled during the initial sampling event due to an operational issue, where there was a possible laboratory error or sample collection error, or where a sampling location not originally required for sampling 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 collecting the samples have previous experience sampling for lead.
- Any of the EPA approved drinking water methods can be used for the analysis of lead in drinking water (USEPA Method 200.9, USEPA Method 200.8, USEPA Method 200.5, SM3113B, or ASTM3559-D) provided that the reporting limit is less than or equal to 2 µg/L.
- The laboratory will analyze a Field Reagent Blank (FRB) which is to be collected at every school building being sampled for lead in drinking water.
- Laboratories must provide the results to the District within the timeframe required under contract (a 14 day turn-around time is average).
- Laboratories will report the results in units of µg/L or (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 ID Code, parameter to be analyzed (lead), date and time 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 to be used for the collection of Field Reagent Blanks (FRB). The sampler will transport the ASTM Type I reagent-grade water to the school and will transfer about 250 ml of the water into a sample container once near a sampling 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 publicly available and for any results which 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.

Follow-up Flush Sample – a sample that is collected from an outlet after allowing the outlet to run for a specified amount of time, therefore flushing the outlet. This sample is representative of the water quality of the water located in the plumbing posterior to the outlet apparatus.

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

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

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.

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 aid 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. For additional guidance, see Attachment Hiii.

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 8: 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: Passaic County Technical Institute Grade Levels: High School
 Address: 45 Reinhardt Road, Wayne, NJ 07470
 Individual school project officer Signature: Sal Antonillo Date: 4/9/2020

Questions	Answers
Background Information	
1. What year was the original building constructed? Were any buildings or additions added to the original facility?	1970
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.	N/A
3. Where are the most recent plumbing repairs and replacements?	Location: F-wing Bathrooms Description: RENNOVATION
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: Location:
5. Is there point of entry (POE) or point of use (POU) treatment in use?	Y / <u>N</u> Type: Location:

Questions	Answers
6. Are there tanks in your plumbing system (pressure tanks, gravity storage tanks)?	Y / (N)
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?	ND
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)
9. Have there been any complaints about bad (metallic) taste? Note location(s).	Y / (N) 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: <ul style="list-style-type: none"> • Name of contaminant(s) • Concentrations found • pH level Is testing done regularly at the building?	
11. Other plumbing background questions include: <ul style="list-style-type: none"> • 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?	

Questions	Answers
<p>Walk-Through <i>These questions should be addressed during the walk-through of the facility, while Attachment C- Drinking Water Outlet Inventory is being completed.</i></p>	
<p>1. Confirm the material of Service Line visually.</p>	
<p>2. Confirm the presence of POE or POU treatment.</p>	
<p>3. What are the potable water pipes made of in your facility?</p> <ul style="list-style-type: none"> • Lead • Plastic • Galvanized Metal • Cast Iron • <u>Copper</u> • Other <p>Note the water flow through the building and the areas that receive water first, and which areas receive water last.</p>	
<p>4. Are electrical wires grounded to Water Pipes? Note location(s).</p>	<p style="text-align: center;">(Y) / N</p> <p>Location:</p>
<p>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.</p>	<p>Complete in "Brass" Column in Attachment C- Water Outlet Inventory.</p>
<p>6. Locate all drinking water outlets (i.e. water coolers, bubblers, ice machines, kitchen/ food prep sinks, etc.) in the facility.</p>	<p>Complete in Attachment C-Water Outlet Inventory.</p>

Questions	Answers
<p>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?</p> <p>Recalled Drinking Water Fountains</p> <p>Make and Model</p>	<p>Y / N</p>
<p>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.</p>	<p>Type</p> <p>Complete in "Signs of Corrosion" column in Attachment C- Drinking Water Outlet Inventory.</p>
<p>9. Are there any outlets that are not operational and therefore out of service? Permanently? Temporarily?</p>	<p>Y / N</p> <p>Complete "Operational Column" in Attachment C- Drinking Water Outlet Inventory.</p> <p>Type/ Location</p> <p>Description of Operational Issue and if Permanently or Temporarily Out of Service.</p>

Attachment C - Drinking Water / Water Outlet Inventory

Passaic County Technical Institute
 45 Reinhardt Road, Wayne, NJ
 Grade Levels 9-12
 Constructed in 1970

Project Officer: Brett Iwicki
 Date Completed: 5/1/2020

#1	Type	Location	Numbered Location on Map	Code	Operational ² (Y/N)	Signs of Corrosion ³ (Y/N)	Filter ⁴ (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	
	WATER FOUNTAIN	Outside of Cafeteria 2- 1st floor	1	1FH-CAFE2-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Inside Cafeteria 2	2	1F-CAF2-WF	Y	N	N	N	N	N				
	SINK	1st floor kitchen food prep sink	3	1F-KS-FP	Y	N	N	N	N	N				
	SINK	1st floor kitchen- see map	4	1F-KS-2	Y	N	N	N	N	N				
	SINK	1st floor kitchen- see map	5	1F-KS-3	Y	N	N	N	N	N				
	SINK	1st floor kitchen- see map	6	1F-KS-4	Y	N	N	N	N	N				
	SINK	1st floor kitchen- see map	7	1F-KS-5	Y	N	N	N	N	N				
	SINK	1st floor kitchen- see map	8	1F-KS-6	Y	N	N	N	N	N				
	WATER FOUNTAIN	Outside of H13- 1st floor	9	1FH-H13-L-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	1st floor hallway- outside of Board Room	10	1FH-BDR-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Outside of Cafeteria 1- 1st floor	11	1FH-CAF1-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Inside Cafeteria 1	12	1FO-CAF1-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	B wing girl's bathroom	13	B1F-GBR-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	B wing boy's bathroom	14	B1F-BBR-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	HVAC shop	15	1F-HVAC-WF	Y	N	N	N	N	N				
	SINK	Machine/manufacturing shop	16	1F-MS-S	Y	N	N	N	N	N				
	WATER FOUNTAIN	Second floor entrance	17	2F-ENT-WF-FILT	Y	N	Y	N	N	N				
	WATER FOUNTAIN	Outside of General Office- 2nd floor	18	2F-GO-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Outside of C205	19	2F-C205-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	2nd floor Cafeteria	20	2F-CAF-WF-FILT	Y	N	Y	N	N	N				
	SINK	2nd floor kitchen- see map	21	2F-KS-1	Y	N	N	N	N	N				
	SINK	2nd floor kitchen- see map	22	2F-KS-2	Y	N	N	N	N	N				
	SINK	Outside of B207	23	2F-B207-KS	Y	N	N	N	N	N				
	WATER FOUNTAIN	Outside of C200	24	2F-C200-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Outside of D203	25	2F-D203-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Outside of H33	26	2F-H33-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Outside of H19	27	2F-H19-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Outside of F108	28	1F-F108-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Outside of F207	29	2F-F207-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Outside of Main Office- Left	30	2F-M0-L-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Outside of Main office- Right	31	2F-M0-R-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	1st floor across from Stair 3- Left	32	1F-S3-L-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	1st floor across from Stair 3- Right	33	1F-S3-R-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Outside of Nurses Office- Left	34	1F-N0-L-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Outside of Nurses Office- Right	35	1F-N0-R-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	STEM 1st floor bathroom- Left	36	1F-STEMBR-L-WF	Y	N	Y	N	N	Y				Only bottle filler is motion activated
	WATER FOUNTAIN	STEM 1st floor bathroom- Right	37	1F-STEMBR-R-WF	Y	N	Y	N	N	Y				Only bottle filler is motion activated
	WATER FOUNTAIN	STEM 2nd floor bathroom- Left	38	2F-STEMBR-L-WF	Y	N	Y	N	N	Y				Only bottle filler is motion activated
	WATER FOUNTAIN	STEM 2nd floor bathroom- Right	39	2F-STEMBR-R-WF	Y	N	Y	N	N	Y				Only bottle filler is motion activated
	SINK	STEM Kitchen sink- see map	40	STEM-KS1	Y	N	N	N	N	N				
	SINK	STEM Kitchen sink- see map	41	STEM-KS2	Y	N	N	N	N	N				
	SINK	STEM Kitchen sink- see map	42	STEM-KS3	Y	N	N	N	N	N				
	SINK	STEM Kitchen sink- see map	43	STEM-KS4	Y	N	N	N	N	N				
	SINK	STEM Kitchen sink- see map	44	STEM-KS5	Y	N	N	N	N	N				
	WATER FOUNTAIN	STEM 3rd floor bathroom- Left	45	3F-STEMBR-L-WF	Y	N	Y	N	N	Y				Only bottle filler is motion activated
	WATER FOUNTAIN	STEM 3rd floor bathroom- Right	46	3F-STEMBR-R-WF	Y	N	Y	N	N	Y				Only bottle filler is motion activated
	WATER FOUNTAIN	Auto shop- HX building	47	HX-AUTO-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Outside of H107- HX building	48	HHX-H107-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Auto body shop in HX building- closer to entrance	49	HX-AB-WF1	Y	N	N	N	N	N				
	WATER FOUNTAIN	Auto body shop in HX building- further from entrance	50	HX-AB-WF2	Y	N	N	N	N	N				
	WATER FOUNTAIN	T-building outside bathroom	51	TRB-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Outside of N122 in Rocco building	52	RIF-N122-WF	Y	N	N	N	N	N				
	SINK	Rocco building kitchen sink- see map	53	R1F-KS1	Y	N	N	N	N	N				
	SINK	Rocco building kitchen sink- see map	54	R1F-KS2	Y	N	N	N	N	N				
	SINK	Rocco building kitchen sink- see map	55	R1F-KS3	Y	N	N	N	N	N				
	WATER FOUNTAIN	Rocco building 1st floor near entrance	56	1RFH-ENT-WF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Rocco building 2nd floor entrance	57	R2F-ENT-WF	Y	N	N	N	N	N				
	HOSE	Hose in Athletic Center Hydro Room	58	AC1-H-HOSE	Y	N	N	N	N	N				
	SINK	Sink in Athletic Center Hydro Room	59	AC1-H-SINK	Y	N	N	N	N	N				
	WATER FOUNTAIN	Left water fountain outside of Athletic Center office	60	AC1FH-OFF-LWF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Right water fountain outside of Athletic Center office	61	AC1FH-OFF-RWF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Athletic center 2nd floor hallway- Left	62	AC2FH-LWF	Y	N	N	N	N	N				
	WATER FOUNTAIN	Athletic center 2nd floor hallway- Right	63	AC2FH-RWF	Y	N	N	N	N	N				
	HOSE	Hose outside near Hydro Room	64	AC-OUT-HOSE	Y	N	N	N	N	N				
	SINK	Athletic Center Field House Sink	65	ACFH-SINK	Y	N	N	N	N	N				
	HOSE	Athletic Center Field House Hose	66	ACFH-HOSE	Y	N	N	N	N	N				
	HOSE	Hose outside near Hydro Room- Flushed	64-F	AC-OUT-HOSE-FLUSH	Y	N	N	N	N	N				Flush for 30 seconds before collecting sample
	HOSE	Athletic Center Field House Hose- Flushed	66-F	ACFH-HOSE-FLUSH	Y	N	N	N	N	N				Flush for 30 seconds before collecting sample
	WATER FOUNTAIN	Athletic Center Field House WF- outside	67	ACFH-WF	Y	N	N	N	N	N				

¹ Number outlets starting all the closet 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

At the time of certification
(Complete for each school)

TO BE COMPLETED BY THE PASSAIC COUNTY TECHNICAL INSTITUTE DISTRICT REPRESENTATIVE:

School Name: Passaic
County Technical Institute

Sample collection address: 45
Reinhardt Road, Wayne, NJ
07470

Water was last used: Time: 5:00 PM Date: 4/7/2020

Sample commencement: Time: 9:00 AM Date: 4/9/2020

I have read the Passaic County Technical Institute Lead Drinking Water Testing Sampling Plan and Quality Assurance Project Plan and I am certifying that samples were collected in accordance with these plans.

Sal Antonillo
Signature

6/16/2020
Date

H.iv: Sampling Event Checklist

To be completed the day of sampling

Before Beginning Sampling:

- Review and Sign QAPP.
- Review School packet prior to sampling- including floor plan with sample locations, water outlet inventory including all outlets to be sampled, filter inventory including which drinking water outlets that have filters, and if applicable pre-sampling event flushing schedule including 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. If the stagnation time has not been met, the sampling will have to be rescheduled.

Sampling:

- Prepare a Field Blank.
- Start sampling at the outlet closest to the point of entry. Follow the sampling order established to follow the flow of cold water throughout the building.
- For each building being sampled record the time that sampling begins.
- Leave all aerators/screens and filters in place.
- Wearing gloves, collect samples into a 250 ml pre-cleaned wide-mouth bottle.
- Record the time each sample is collected.
- If follow-up flush samples are being collected, record the duration of the flush.
- Label all Follow-Up Flush Samples with “FLUSH” after their unique sample location code. (e.g. WHS-1FL-DW and WHS -1FL-DW-FLUSH)
- 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 not working, or the outlet has a filter.

After Sampling:

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

Project Officer:	Brett Iwicki	<i>Brett Iwicki</i>	4/9, 23/2020
	Print Name	Signature	Date
Sampler:	Julia Napoli	<i>Julia Napoli</i>	4/9, 23/2020
	Print Name	Signature	Date

H.v: Sample Signs



WATER TESTING IN PROGRESS

PLEASE DO NOT USE ANY
WATER SOURCES – SINKS,
FOUNTAINS, TOILETS, ETC.

DO NOT DRINK



SAFE FOR HANDWASHING



H.vii: FOLLOW-UP SAMPLING INVENTORY

School Name Passaic County Technical Institute

Individual School Project Officer: _____

Date Completed: 4/23/2020

SAMPLE LOCATION/ SAMPLE LOCATION ID CODE	REASON FOR FOLLOW-UP SAMPLING*	DATE RESAMPLED
AC-OUT-HOSE (Athletic Center Exterior)	Lead above standard (from hose attachment)	4/23/2020
ACFH-HOSE (Athletic Center Field House Exterior)	Lead above standard (from hose attachment)	4/23/2020

Appendix B: Chain of Custody



Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Web: www.ialonline.com

Customer Information

Company: Whitman
Address: 7 Pleasant Hill Rd
Cranbury, NJ 08512
Telephone #: 732-390-5858
Project Manager: Brett Twicki
Email Address(es): btwicki@whitman.com

Reporting Information

REPORT TO: [] Check here if same as "Customer Information"
Address:
Attn:
INVOICE TO:
Address:
Attn: Brett Twicki
PO # 20-04-01
Quote #

Deliverables

Surcharge may apply for regulatory
NJ, CT, PA NY
Results Only (Level I) [X] ASP Category A
Reduced (Level III) [] ASP Category B*
Regulatory/Full (Level IV) []
24 hr - 100%...
48 hr - 75%...
72 hr - 50%...
96 hr - 35%...
5 day - 25%...
6-9 day - 10%...
Standard (10 business days) Verbal
Rush/date needed (only if pre-approved)**
Hard Copy: Standard 3 week Other - call for price

EDDs

NJ SRP [X]
NYSDEC Equis []
lab approved custom EDD []
NO EDD REQ'D []
Describe: YES [] NO []

Concentrations Expected:

Low Med High

Turn-Around Time (TAT)

Petroleum Hydrocarbons - Selection is REQUIRED
[] NJ EPH-DRO - Category 1 TAT for PHC, if other than 2 weeks:
[] NJ EPH-C40 - Category 2 [] CT ETPH
[] NJ EPH-Fractionated - Cat 2 [] DRO-8015

Regulatory Requirement

New Jersey
[] AWQS (TOGS Table 1)
[] GWEL (TOGS Table 5)
[] Part 375-6.8(a) - Unrestricted
[] Part 375-6.8(b) - Restricted
[] CP-51 Table 2 or 3 (selection required)
Other States / Criteria
[] Pennsylvania Act 2
[] CT RCSA 22a-133k-1-k3
[] TSCA PCBs
OTHER Regulatory Requirements - specify in comments
Sample Specific Notes:

Client ID	Depth (ft only)	Sampling		# containers	IAL #
		Date	Time		
IFH-CAFEZ-WF		4/9/20	9:25 PM	1	1
IF-CAFZ-WF			927	1	2
IF-KS-FP			930	1	3
IF-KS-2			932	1	4
IF-KS-3			934	1	5
IF-KS-4			935	1	6
IF-KS-5			936	1	7
IF-KS-6			938	1	8

Sample ID	Sample Matrix	Preservative (use code)	
		Container Code:	Container Type (use code)
IFH-CAFEZ-WF	Oil - Oil	3	3
IF-CAFZ-WF	W - Waste Water	3	3
IF-KS-FP	S - Soil	3	3
IF-KS-2	SED - Sediment	3	3
IF-KS-3	GW - Groundwater	3	3
IF-KS-4	SW - Surface Water	3	3
IF-KS-5	LIQ - Liquid (specify)	3	3
IF-KS-6	M - Multiphase	3	3

ANALYTICAL PARAMETERS (please note if contingent)

Special Instructions/QC Requirements & Comments:

Relinquished by (Signature and Company) Date Time Received by (Signature and Company) Date Time
 [Signature] 4/9/20 1330 [Signature] 4/9/20 1350

Carrier (check one):
 IAL Courier
 Client Courier
 FedEx/UPS***

***Tracking #:

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Page: 1 of 9



Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Web: www.ialonline.com

Customer Information

Reporting Information

Deliverables

EDDS

Concentrations Expected:

Company: Whitman Check here if same as "Customer Information"

Address: _____

Telephone #: _____

Project Manager: _____

Email Address(es): _____

Project Name: PCTI

Project Location (State): _____

Bottle Order #: _____

"Report to" / "Invoice To" same as above

Report TO: _____

Address: _____

Attn: _____

INVOICE TO: _____

Address: _____

Attn: _____

PO # _____

Quote # _____

Sample Matrix: _____

DW - Drinking Water OI - Oil
 WW - Waste Water S - Soil
 GW - Groundwater SED - Sediment
 SW - Surface Water SOL - Solid (specify)
 LIQ - Liquid (specify)
 M - Multiphasic W - Wipe

Turn-Around Time (TAT)

Regulatory Requirement

Standard (10 business days) Verbal

Rush/date needed (only if pre-approved)**

Hard Copy: Standard 3 week Other - call for price

Petroleum Hydrocarbons - Selection is REQUIRED

NJ EPH-DRO - Category 1 TAT for PHC, if other than 2 weeks:
 NJ EPH-C40 - Category 2 CT ETPH
 NJ EPH-Fractionated - Cat 2 DRO-8015

NEW JERSEY NEW YORK

GWQS AWQS (TOGS Table 1)
 IGW GWEL (TOGS Table 5)
 SRS Part 375-6.8(a) - Unrestricted
 Ecological Part 375-6.8(b) - Restricted
 DW CP-51 Table 2 or 3 (selection required)
 SPLP Other States / Criteria

ANALYTICAL PARAMETERS (please note if contingent)

Client ID	Depth (ft only)	Sampling		# containers	IAL #	Matrix	Preservative (use code)	Container Code:	Preservative Code:	Samples previously analyzed by IAL? YES I NO
		Date	Time							
IFH-HR3-L-WF		4/9/20	940	1	9	DW				
IFH-BDR-WF			945		10					
IFH-CA-32			950		11					
IFH-CAF1-WF			950		12					
IFH-CAF1-WF			951		13					
BIF-GRR WE			953		14					
BIF-BBR-WF			955		15					
IF-HVAC-WF			958		16					

FOR LAB USE ONLY

Special Instructions/QC Requirements & Comments:
 Do not run wasted or sample - do not take

Carrier (check one):
 IAL Courier
 Client Courier
 FedEx/UPS**

***Tracking #: _____

Preservative Code: _____

Container Code: _____

Container Type (use code): _____

Relinquished by (Signature and Company): _____

Date: 4/9/20 Time: 1330

Relinquished by (Signature and Company): _____

Date: 4/9/20 Time: _____

SDG #: 2537

Cooler Temp: _____ °C



Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Web: www.ialonline.com

Customer Information

Reporting Information

Deliverables

Concentrations Expected:

Company: Whitman
 Address: _____
 Telephone #: _____
 Project Manager: _____
 Email Address(es): _____

REPORT TO: _____
 Address: _____
 Attn: _____

INVOICE TO: _____
 Address: _____
 Attn: _____

Project Name: PCTI
 Project Location (State): _____
 Bottle Order #: _____

"Report to"/"Invoice To" same as above

Sampled by: _____

Check here if same as "Customer Information"
 Check here if same as "Customer Information"

Address: _____
 Attn: _____

INVOICE TO: _____
 Address: _____
 Attn: _____

Project Name: PCTI
 Project Location (State): _____
 Bottle Order #: _____

"Report to"/"Invoice To" same as above

Sampled by: _____

Completed by IAL: _____
 Field Sampling _____ Equipment Rental _____

SAMPLE INFORMATION

Client ID	Depth (ft only)	Sampling		Matrix	# containers	IAL #
		Date	Time			
1F-MS-S		4/9/20	1001	DW	1	17
2F-ENT-WF-FILT			1010			18
2F-GO-WF			1012			19
2F-C205-WF			1015			20
2F-CAF-WF-FILT			1022			21
2F-K5-1			1020			22
2F-K5-2			1024			23
2F-B207-KS			1026			24

Sample Matrix

DW - Drinking Water
 WW - Waste Water
 GW - Groundwater
 SW - Surface Water
 LIQ - Liquid (specify)
 M - Multiphase

Oil - Oil
 S - Soil
 SED - Sediment
 SOL - Solid (specify)
 SL - Sludge
 W - Wipe

ANALYTICAL PARAMETERS (please note if contingent)

Standard (10 business days) Verbal
 Rush/date needed (only if pre-approved)**

Hard Copy: Standard 3 week Other - call for price

Petroleum Hydrocarbons - Selection is REQUIRED

NJ EPH-DRO - Category 1 TAT for PHC, if other than 2 weeks:
 NJ EPH-C40 - Category 2 CT ETPH
 NJ EPH-Fractionated - Cat 2 DRO-8015

Regulatory Requirement

New Jersey

AWQS (TOGS Table 1)
 GWEL (TOGS Table 5)
 Part 375-6.8(a) - Unrestricted
 Part 375-6.8(b) - Restricted
 CP-51 Table 2 or 3 (selection required)
 Other States / Criteria

Concentrations Expected:

Low	Med	High
Known Hazard:		
YES <input type="checkbox"/>		NO <input type="checkbox"/>

Describe: _____

Turn-Around Time (TAT)

Standard (10 business days) Verbal
 Rush/date needed (only if pre-approved)**

Hard Copy: Standard 3 week Other - call for price

Petroleum Hydrocarbons - Selection is REQUIRED

NJ EPH-DRO - Category 1 TAT for PHC, if other than 2 weeks:
 NJ EPH-C40 - Category 2 CT ETPH
 NJ EPH-Fractionated - Cat 2 DRO-8015

FOR LAB USE ONLY

SDG #: 2537

Cooler Temp: _____ °C

Relinquished by: [Signature] Date: 4/9/20 Time: 1350

Recycled by: [Signature] Date: 4/9/20 Time: 1350

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Page: 3 of 9



Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Web: www.ialonline.com

Customer Information		Reporting Information		Deliverables		Concentrations Expected:	
Company: <u>Whitman</u>		Check here if same as "Customer Information"		Surcharge may apply for regulatory			
Address:		NJ, CT, PA		NY		Low Med High	
Telephone #:		Results Only (Level I)		ASP Category		Known Hazard:	
Project Manager:		Reduced (Level III/IV)		A		YES <input type="checkbox"/> NO <input type="checkbox"/>	
Email Address(es):		Regulatory/Full (Level IV)		B*		Describe:	
Project Name: <u>PCTI</u>		Standard (10 business days) Verbal		New Jersey		New York	
Project Location (State):		Rush/Date needed (only if pre-approved)**		New Jersey		New York	
Bottle Order #:		Hard Copy: Standard 3 week		Other - call for price			
<input type="checkbox"/> "Report to" "Invoice To" same as above		Petroleum Hydrocarbons - Selection is REQUIRED					
Sampled by:		TAT for PHC, if other than 2 weeks:					
COMPLETED BY IAL:		NJ EPH-DRO - Category 1					
Field Sampling		NJ EPH-C40 - Category 2					
EQUIPMENT RENTAL		NJ EPH-Fractionated - Cat 2					
SAMPLE INFORMATION		DRO-8015					
Client ID		ANALYTICAL PARAMETERS (please note if contingent)					
Depth (ft only)		Pennsylvania Act 2					
2F-C700-WF		CT RCSA 22a-133k1-k3					
2F-P203-WF		TSCA PCBs					
2F-H33-WF		OTHER Regulatory Requirements - specify in comments					
2F-H49-WF		Sample Specific Notes:					
1F-F108-WF							
2F-F207-WF							
2F-MD-L-WF							
2F-MD-R-WF							
Samples previously analyzed by IAL?		FOR LAB USE ONLY					
YES / NO		SDG #: <u>2557</u>					
Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab > 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).		Cooler Temp: <u>9</u> °C		Date: <u>4/9/20</u> Time: <u>1350</u>		Date: <u>4/9/20</u> Time: <u>1350</u>	
Carrier (check one):		Received by (Signature and Company)		Date		Time	
<input type="checkbox"/> IAL Courier		<u>[Signature]</u>		<u>4/9/20</u>		<u>1350</u>	
<input type="checkbox"/> Client Courier							
<input type="checkbox"/> FedEx/UPS***							
***Tracking #:							
LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK		Certification IDs: TNI (TNI01284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).				PAGE: <u>1</u> of <u>9</u>	

Chain of Custody Record

Customer Information
Reporting Information
Deliverables
EDDS
Concentrations Expected:

Company: *Whitman* Check here if same as "Customer Information"
 Address: _____
 Telephone #: _____
 Project Manager: _____
 Email Address(es): _____
 Project Name: *PCTI*
 Project Location (State): _____
 Bottle Order #: _____
 "Report to"/"Invoice To" same as above

Turn-Around Time (TAT)
 Rush/Date needed *(only if pre-approved)***
 Hard Copy: Standard 3 week Other - call for price

Regulatory Requirement
 New Jersey: GWQS IGW SRS Ecological DW SPLP
 New York: AWQS (TOGS Table 1) GWEL (TOGS Table 5) Part 375-6.8(a) - Unrestricted Part 375-6.8(b) - Restricted CP-51 Table 2 or 3 (selection required) Other States / Criteria: _____
 Pennsylvania: Pennsylvania Act 2 CT RCSA 22a-133k1-k3 TSCA PCBs
 OTHER REGULATORY REQUIREMENTS - specify in comments:
 Sample Specific Notes:

Sample Matrix
 DW - Drinking Water OI - Oil
 WW - Waste Water S - Soil
 GW - Groundwater SED - Sediment
 SW - Surface Water SOL - Solid (specify)
 LIQ - Liquid (specify)
 M - Multiphaseic SL - Sludge
 W - Wipe

Client ID	Depth (ft only)	Sampling		# containers	Matrix	IAL #	Date	Time	Container Code	Preservative Code	Preservative Type (use code)	Special Instructions/QC Requirements & Comments:
		Date	Time									
<i>1F-S3-L-WF</i>		<i>1102</i>	<i>1102</i>	<i>1</i>	<i>DW</i>	<i>33</i>	<i>4/19/10</i>	<i>1102</i>				
<i>1F-S3-R-WF</i>		<i>1103</i>	<i>1103</i>	<i>1</i>		<i>34</i>	<i>1103</i>	<i>1103</i>				
<i>1F-NO-L-WF</i>		<i>1105</i>	<i>1105</i>	<i>1</i>		<i>35</i>	<i>1105</i>	<i>1105</i>				
<i>1F-NO-R-WF</i>		<i>1109</i>	<i>1109</i>	<i>1</i>		<i>36</i>	<i>1109</i>	<i>1109</i>				
<i>1F-STEMBR-L-WF</i>		<i>1111</i>	<i>1111</i>	<i>1</i>		<i>37</i>	<i>1111</i>	<i>1111</i>				
<i>1F-STEMBR-R-WF</i>		<i>1115</i>	<i>1115</i>	<i>1</i>		<i>38</i>	<i>1115</i>	<i>1115</i>				
<i>2F-STEMBR-L-WF</i>		<i>1117</i>	<i>1117</i>	<i>1</i>		<i>39</i>	<i>1117</i>	<i>1117</i>				
<i>2F-STEMBR-R-WF</i>				<i>1</i>		<i>40</i>						

FOR LAB USE ONLY

SDG #: *2537*

Cooler Temp: *4* °C

Relinquished by (Signature and Company): *[Signature]* Date: *4/19/10* Time: *1350*
 Received by (Signature and Company): *[Signature]* Date: *4/19/10* Time: *1345*

Carrier (check one):
 IAL Courier
 Client Courier
 FedEx/UPS***
 ***Tracking #:

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Page: *9* of *9*



Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Web: www.ialonline.com

Customer Information

Company: *Walton*

Address:

Telephone #:

Project Manager:

Email Address(es):

Project Name: *PCTI*

Project Location (State):

Bottle Order #:

"Report to"/"Invoice To" same as above

Sampled by:

COMPLETED BY IAL:

Field Sampling Equipment Rental

SAMPLE INFORMATION

Client ID

Depth (ft only)

Date

Time

Matrix

containers

IAL #

Preservative Code:

Container Code:

Carrier (check one):

Special Instructions/QC Requirements & Comments:

Preservative Code:

Container Code:

Carrier (check one):

Special Instructions/QC Requirements & Comments:

Preservative Code:

Container Code:

Carrier (check one):

Special Instructions/QC Requirements & Comments:

Preservative Code:

Container Code:

Carrier (check one):

Special Instructions/QC Requirements & Comments:

Reporting Information

Check here if same as "Customer Information"

REPORT TO:

Address:

Attn:

INVOICE TO:

Address:

Attn:

PO #

Quote #

Sample Matrix

Oil - Oil

WW - Drinking Water

GW - Waste Water

SW - Groundwater

LIQ - Surface Water

M - Multiphase

S - Sediment

SOL - Solid (specify)

SL - Sludge

W - Wipe

Rush TAT Charge

24 hr - 100%...

48 hr - 75%...

72 hr - 50%...

96 hr - 35%...

5 day - 25%...

6-9 day - 10%

Standard (10 business days) Verbal

Rushdate needed (only if pre-approved)**

Hard Copy: Standard 3 week

Other - call for price

Petroleum Hydrocarbons - Selection is REQUIRED

NJ EPH-DRO - Category 1

NJ EPH-C40 - Category 2

NJ EPH-Fractionated - Cat 2

DRO-8015

TAT for PHC, if other than 2 weeks:

CT ETPH

DRO-8015

ANALYTICAL PARAMETERS (please note if contingent)

Pennsylvania Act 2

CT RCSA 22a-133k1-k3

TSCA PCBs

OTHER Regulatory Requirements - specify in comments

Sample Specific Notes:

Deliverables

Surchage may apply for regulatory

NJ, CT, PA

Results Only (Level I)

Reduced (Level II/III)

Regulatory/ Full* (Level IV)

ASP Category A

ASP Category B*

NYSDEC EQUIS

lab approved custom EDD

NO EDD REQ'D

Describe:

Low

Med

High

Known Hazard:

YES

NO

EDDs

NJ SRP

NYSDEC EQUIS

lab approved custom EDD

NO EDD REQ'D

Describe:

Low

Med

High

Known Hazard:

YES

NO

Concentrations Expected:

Low

Med

High

Known Hazard:

YES

NO

Regulatory Requirement

New Jersey

New York

AWQS (TOGS Table 1)

GWEL (TOGS Table 5)

Part 375-6.8(a) - Unrestricted

Part 375-6.8(b) - Restricted

CP-51 Table 2 or 3 (selection required)

Other States / Criteria

FOR LAB USE ONLY

SDG #: *2457*

Cooler Temp: *4* °C

Date

Time

Received by (Signature and Company)

Signature

Date

Time

Received by (Signature and Company)

Signature

Date

Time

Received by (Signature and Company)

Signature

Date

Time

Received by (Signature and Company)

Signature

Date

Time

Received by (Signature and Company)

Signature

Date

Time

Received by (Signature and Company)

Signature

Date

Time

Certification IDs: TN1 (TN101284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).

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IAL Rev 11/2019

PAGE: *6* of *9*



Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Web: www.ialonline.com

Customer Information		Reporting Information		Deliverables		EDDs		Concentrations Expected:	
Company: <u>Whitman</u>	Check here if same as "Customer Information"	NJ, CT, PA	NY	NJ SRP	Low	Med	High		
Address:		Results Only (Level I)	ASP Category A	NYSDEC Equis	Known Hazard:				
Telephone #:		Reduced (Level III/IV)	Regulatory/Full (Level IV)	lab approved custom EDD	YES <input type="checkbox"/> NO <input type="checkbox"/>				
Project Manager:		6-9 day - 10%		NO EDD REQ'D	Describe:				
Email Address(es):		Standard (10 business days) Verbal			New Jersey				
Project Name: <u>PCTI</u>		Rush/date needed (only if pre-approved)**			New York				
Project Location (State):		Hard Copy: Standard 3 week	Other - call for price		AWQS (TOGS Table 1)				
Bottle Order #:		Petroleum Hydrocarbons - Selection is REQUIRED			GWEL (TOGS Table 5)				
<input type="checkbox"/> "Report to" / "Invoice To" same as above		TAT for PHC, if other than 2 weeks:			Part 375-6.8(a) - Unrestricted				
Sampled by:		<input type="checkbox"/> NJ EPH-DRO - Category 1 <input type="checkbox"/> NJ EPH-C40 - Category 2 <input type="checkbox"/> NJ EPH-Fractionated - Cat 2 <input type="checkbox"/> DRO-8015			Part 375-6.8(b) - Restricted				
COMPLETED BY IAL:		ANALYTICAL PARAMETERS (please note if contingent)			CP-51 Table 2 or 3 (selection required)				
Field Sampling		Sample Matrix			Other States / Criteria				
Equipment Rental		DW - Drinking Water WW - Waste Water GW - Groundwater SW - Surface Water LIQ - Liquid (specify) M - Multiphase			Pennsylvania Act 2				
SAMPLE INFORMATION		OI - Oil S - Soil SED - Sediment SOL - Solid (specify) SL - Sludge W - Wipe			CT RCSA 22a-133k1-k3				
Client ID	Depth (ft only)	Date	Time	Matrix	# containers	IAL #	TSCA PCBs		
<u>HAX-H101-WF</u>		<u>4/9/20</u>	<u>1135</u>	<u>DW</u>	<u>1</u>	<u>99</u>	OTHER Regulatory Requirements - specify in comments		
<u>HX-AB-WF1</u>			<u>1137</u>			<u>50</u>	Sample Specific Notes:		
<u>HX-AB-WF2</u>			<u>1140</u>			<u>51</u>	FOR LAB USE ONLY		
<u>TBR-WF</u>			<u>1148</u>			<u>52</u>	SDG #: <u>2457</u>		
<u>RIF-N122-WF</u>			<u>1150</u>			<u>53</u>	Cooler Temp: <u>4</u> °C		
<u>RIF-N51</u>			<u>1152</u>			<u>54</u>	Date: <u>4/9/20</u> Time: <u>1350</u>		
<u>RIF-N50</u>			<u>1154</u>			<u>55</u>	Received by (Signature and Company)		
<u>RIF-N53</u>			<u>1154</u>			<u>56</u>	Relinquished by (Signature and Company)		
Samples previously analyzed by IAL?	Preservative Code:	Container Code:	Preservative (use code)	Container Type (use code)	Special Instructions/QC Requirements & Comments:				
YES / NO	1 = None 2 = HCl 3 = HNO3 4 = MeOH 5 = NaOH 6 = H2SO4 7 = Other	A = Amber Glass B = Plastic C = Vial D = Glass E = EnCore T = Terracore			Carrier (check one): <input type="checkbox"/> IAL Courier <input type="checkbox"/> Client Courier <input type="checkbox"/> FedEx/UPS*** ***Tracking #				
	Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab ≥ 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).								



Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Web: www.ialonline.com

Customer Information

Reporting Information

Deliverables

EDDs

Concentrations Expected:

Company: Whitman
 Address: _____
 Telephone #: _____
 Project Manager: _____
 Email Address(es): _____

REPORT TO: _____
 Address: _____
 Attn: _____

INVOICE TO: _____
 Address: _____
 Attn: _____

Project Name: PCTI
 Project Location (State): _____
 Bottle Order #: _____
 "Report to" / "Invoice To" same as above
 Sampled by: _____

24 hr - 100%...
 48 hr - 75%...
 72 hr - 50%...
 96 hr - 35%...
 5 day - 25%...
 6-9 day - 10%...

NJ, CT, PA NY
 Results Only (Level I)
 Reduced (Level III/IIII)
 Regulatory Full* (Level IV)

ASP Category
 A
 B

NJ SRP
 NYSDEC EQUIS
 lab approved custom EDD
 NO EDD REQ'D

Low Med High
 Known Hazard:
 YES NO
 Describe: _____

Turn-Around Time (TAT)
 Standard (10 business days) Verbal
 Rush/date needed (only if pre-approved)**
 Hard Copy: Standard 3 week Other - call for price

Regulatory Requirement
 New Jersey New York
 GWQS AWQS (TOGS Table 1)
 IGW GWEL (TOGS Table 5)
 SRS Part 375-6.8(a) - Unrestricted
 Ecological Part 375-6.8(b) - Restricted
 DW CP-51 Table 2 or 3 (selection required)
 SPLP Other States / Criteria

Petroleum Hydrocarbons - Selection is REQUIRED
 NJ EPH-DRO - Category 1 TAT for PHC, if other than 2 weeks:
 NJ EPH-C40 - Category 2 CT ETPH
 NJ EPH-Fractionated - Cat 2 DRO-8015

Client ID	Depth (ft only)	Sampling		Matrix	# containers	IAL #
		Date	Time			
1RPH-ENT-WF		4/10	1158	DW	1	57
RZE-ENT-WF			1200			58
ACI-H-HSE			1215			59
ACI-H-SINK			1217			60
ACIFH-OFF-LWF			1219			61
ACIFH-OFF-RWF			1221			62
AC2FH-LWF			1225			63
ACCFH-RWF			1225			64

ANALYTICAL PARAMETERS (please note if contingent)

Preservative Code: _____
 Container Code: _____
 Preservative (use code): _____
 Container Type (use code): _____

Special Instructions/QC Requirements & Comments:

Relinquished by (Signature and Company): [Signature]
 Date: 4/9/20 Time: 1350
 Received by (Signature and Company): [Signature]
 Date: 4/9/20 Time: 1350

SDG #: 2457
 Cooler Temp: 7 °C

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 IAL Rev 11/2019
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Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Web: www.lalonline.com

Customer Information			Reporting Information				Deliverables			EDDs			Concentrations Expected:		
Company:	Whitman	Report TO:	<input type="checkbox"/> Check here if same as "Customer Information"			24 hr - 100%...	NY	NJ SRP	Low	Med	High	Known Hazard:			
Address:		Address:				48 hr - 75%...	ASP Category	NYSDEC EQuls							
Telephone #:		Attn:				72 hr - 50%...	A	lab approved custom EDD				Describe:			
Project Manager:		INVOICE TO:				96 hr - 35%...	Regulatory/ Full	NO EDD REQ'D				YES <input type="checkbox"/> NO <input type="checkbox"/>			
Email Address(es):		Address:				5 day - 25%...	B*								
Project Name:	PCTI	Attn:				6-9 day - 10%									
Project Location (State):		Quote #:				Standard (10 business days) Verbal						Regulatory Requirement			
Bottle Order #:		Sample Matrix:				Rush/date needed						New Jersey			
<input type="checkbox"/> "Report to" invoice To" same as above		DW - Drinking Water				(only if pre-approved)**						New York			
Sampled by:		WW - Waste Water				Hard Copy: Standard 3 week						AWQS (TOGS Table 1)			
COMPLETED BY IAL:		SW - Surface Water				Petroleum Hydrocarbons - Selection is REQUIRED						GWEL (TOGS Table 5)			
Field Sampling		LQ - Liquid (specify)				<input type="checkbox"/> NJ EPH-DRO - Category 1						Part 375-6.8(a) - Unrestricted			
EQUIPMENT RENTAL		M - Multiphasic				<input type="checkbox"/> NJ EPH-C40 - Category 2						Part 375-6.8(b) - Restricted			
Client ID						<input type="checkbox"/> NJ EPH-Fractionated - Cat 2						CP-51 Table 2 or 3 (selection required)			
AC-OUT-HOSE						<input type="checkbox"/> DRO-8015						Other States / Criteria			
ACFH - STINK						ANALYTICAL PARAMETERS (please note if contingent)							Pennsylvania Act 2		
ACFH - HOSE												CT RCSA 22a-133k1-k3			
FB												TSCA PCBs			
												OTHER Regulatory Requirements - specify in comments			
												Sample Specific Notes:			
Samples previously analyzed by IAL?												FOR LAB USE ONLY			
YES / NO												SDG #: 2457			
Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab > 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).												Cooler Temp: 4 °C			
Carrier (check one):												Date: 4/9/20			
<input type="checkbox"/> IAL Courier												Time: 1330			
<input type="checkbox"/> Client Courier												Received by (Signature and Company):			
<input type="checkbox"/> FedEx/UPS**															
***Tracking #:															

SAMPLE RECEIPT VERIFICATION

CASE NO: E 20 **02537**

CLIENT: **Whitman**

COOLER TEMPERATURE: 2° - 6°C:

(See Chain of Custody)

Comments

COC: **COMPLETE** / INCOMPLETE
KEY

= YES/NA
 = NO

VOA received: Encore IGW - Methanol
(check one) Terra Core No Preservative

Bottles Intact
 no-Missing Bottles
 no-Extra Bottles

Sufficient Sample Volume
 no-headspace/bubbles in VO's
 Labels intact/correct
 pH Check (exclude VO's)¹
 Correct bottles/preservative
 Sufficient Holding/Prep Time¹
 Multiphasic Sample
 Sample to be Subcontracted
 Chain of Custody is Clear

did not receive sample!!

¹ All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS: _____

SAMPLE(S) VERIFIED BY: INITIAL **AP** DATE **4/9/20**

CORRECTIVE ACTION REQUIRED: YES (SEE BELOW) NO

If COC is **NOT** clear, **STOP** until you get client to authorize/clarify work.

CLIENT NOTIFIED: YES Date/ Time: _____ NO

PROJECT CONTACT: _____

SUBCONTRACTED LAB: _____

DATE SHIPPED: _____

ADDITIONAL COMMENTS: _____

VERIFIED/TAKEN BY: INITIAL **mf** DATE **4/13/20**



Integrated Analytical Labs
273 Franklin Road
Randolph, NJ 07869

Chain of Custody Record

Contact Us: 973-361-4252
Web: www.ialonline.com

Customer Information		Reporting Information		Deliverables		Concentrations Expected:	
Company: <i>Whitman</i> Address: <i>7 Pleasant Hill Rd</i> <i>Cranbury NJ 08512</i> Telephone #: <i>732-390-5858</i> Project Manager: <i>Beth Twizki</i> Email Address(es): <i>b.twizki@whitman.com</i> Project Name: <i>PCTI</i> Project Location (State): <i>NJ</i>		Check here if same as "Customer Information" REPORT TO: <i>.</i> Address: Attn: INVOICE TO: Address: Attn: PO # <i>20-04-01T</i> Quote # Sample Matrix DW - Drinking Water WW - Waste Water GW - Groundwater SW - Surface Water LIQ - Liquid (specify) M - Multiphase		*Rush TAT Charge 24 hr - 100%... 48 hr - 75%... 72 hr - 50%... 96 hr - 35%... 5 day - 25%... 6-9 day - 10%... NJ, CT, PA Results Only (Level I) Reduced (Level III/IV) Regulatory/Fair (Level V) NY ASP Category A ASP Category B NJ SRP NYSDEC EQUIS lab approved custom EDD NO EDD REQ'D		Low Med High Known Hazard: YES <input type="checkbox"/> NO <input type="checkbox"/> Describe: Regulatory Requirement New Jersey <input type="checkbox"/> AWQS (TOGS Table 1) <input type="checkbox"/> IGW (TOGS Table 5) <input type="checkbox"/> SRS (Part 375-6.8(e) - Unrestricted) <input type="checkbox"/> Ecological (Part 375-6.8(b) - Restricted) <input checked="" type="checkbox"/> DW (CP-51 Table 2 or 3 (selection required)) <input type="checkbox"/> SPLP (Other States / Criteria) New York <input type="checkbox"/> AWQS (TOGS Table 1) <input type="checkbox"/> GWEL (TOGS Table 5) <input type="checkbox"/> Part 375-6.8(e) - Unrestricted <input type="checkbox"/> Part 375-6.8(b) - Restricted <input type="checkbox"/> CP-51 Table 2 or 3 (selection required) <input type="checkbox"/> Other States / Criteria Pennsylvania Act 2 <input type="checkbox"/> CT RCSA 22a-133k1-k3 <input type="checkbox"/> TSCA PCBs OTHER Regulatory Requirements - specify in comments Sample Specific Notes:	
Turn-Around Time (TAT)		ANALYTICAL PARAMETERS (please note if contingent)		FOR LAB USE ONLY		SDG #:	
Standard (10 business days) Verbal Rush/date needed (only if pre-approved) Hard Copy: Standard 3 week Other - call for price Petroleum Hydrocarbons - Selection is REQUIRED <input type="checkbox"/> NJ EPH-DRO - Category 1 TAT for PHC, if other than 2 weeks: <input type="checkbox"/> NJ EPH-C40 - Category 2 <input type="checkbox"/> CT ETPH <input type="checkbox"/> NJ EPH-Fractionated - Cat 2 <input type="checkbox"/> DRO-8015		Date Time Matrix # containers IAL # <i>4/23/20 0915 DW 1 1</i> <i>0920 2</i> <i>0925 3</i> <i>0926 4</i> <i>Lead</i>		Preservative (use code) Container Type (use code) 3 3		2812 Cooler Temp: <i>4</i> °C Date Time <i>4/23/20 1000</i>	
Relinquished by (Signature and Company) <i>[Signature]</i>		Received by (Signature and Company) <i>[Signature]</i>		Special Instructions/QC Requirements & Comments: <i>Hold ACFH-WF-CUSH</i>		Carrier (check one): <input type="checkbox"/> IAL Courier <input type="checkbox"/> Client Courier <input type="checkbox"/> FedEx/UPS*** ***Tracking #	
Samples previously analyzed by IAL? YES / NO		Preservative Code: 1 = None 2 = HCl 3 = HNO3 4 = MeOH 5 = NaOH 6 = H2SO4 7 = Other		Container Code: A = Amber Glass B = Plastic C = Vial D = Glass E = EnCore T = Terracore		Date Time <i>4/23/20 1000</i>	
Please print legibly and fill out completely. Samples cannot be processed and the turnaround time (TAT) will not start until any ambiguities have been resolved. TAT starts the following day if samples rec'd at lab > 5PM. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY IAL'S TERMS & CONDITIONS (found on rear of pink copy).		IAL Rev 11/2019		LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK		Certification IDs: TNI (TN101284); CT (PH-0699); NJ (14751); NY (11402); PA (68-00773).	

SAMPLE RECEIPT VERIFICATION

CASE NO: E 20

02812

CLIENT:

Whitman

COOLER TEMPERATURE: 2° - 6°C:

(See Chain of Custody)

Comments

COC: COMPLETE / INCOMPLETE
KEY

= YES/NA
 = NO

VOA received: Encore IGW - Methanol
(check one) Terra Core No Preservative

Bottles Intact
 no-Missing Bottles
 no-Extra Bottles

Sufficient Sample Volume
 no-headspace/bubbles in VO's
 Labels intact/correct
 pH Check (exclude VO's)¹
 Correct bottles/preservative
 Sufficient Holding/Prep Time¹

Multiphasic Sample
 Sample to be Subcontracted
 Chain of Custody is Clear

¹ All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY: INITIAL AS

DATE 4/23/20

CORRECTIVE ACTION REQUIRED: YES (SEE BELOW) NO

If COC is NOT clear, STOP until you get client to authorize/clarify work.

CLIENT NOTIFIED: YES Date/ Time: _____ NO

PROJECT CONTACT: _____

SUBCONTRACTED LAB: _____

DATE SHIPPED: _____

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY: INITIAL KJ

DATE 4/24/20

Appendix C: Lead Results

Field ID	Flushed Y/N	Laboratory Sample ID	Laboratory Name	Lab Certification ID	Date Sampled	Time Sampled	Analytical Method	Date of Analysis	Time of Analysis HH:MM	Concentration (µg/L)	Reporting Limit (µg/L)	Dilution Factor	Digested (Y/N)	Qualifier
1FH-CAFE2-WF	N	02537-001	IAL	14751	4/9/2020	925	EPA 200.8	4/14/2020	1622	0.941	2	NA	Y	J
1F-CAF2-WF	N	02537-002	IAL	14751	4/9/2020	927	EPA 200.8	4/14/2020	1656	ND	2	NA	Y	
1F-KS-FP	N	02537-003	IAL	14751	4/9/2020	930	EPA 200.8	4/14/2020	1708	ND	2	NA	Y	
1F-KS-2	N	02537-004	IAL	14751	4/9/2020	932	EPA 200.8	4/14/2020	1713	ND	2	NA	Y	
1F-KS-3	N	02537-005	IAL	14751	4/9/2020	934	EPA 200.8	4/14/2020	1717	ND	2	NA	Y	
1F-KS-4	N	02537-006	IAL	14751	4/9/2020	935	EPA 200.8	4/14/2020	1721	1.4	2	NA	Y	J
1F-KS-5	N	02537-007	IAL	14751	4/9/2020	936	EPA 200.8	4/14/2020	1725	5.11	2	NA	Y	
1F-KS-6	N	02537-008	IAL	14751	4/9/2020	938	EPA 200.8	4/14/2020	1730	ND	2	NA	Y	
1FH-H1B-L-WF	N	02537-009	IAL	14751	4/9/2020	940	EPA 200.8	4/14/2020	1734	ND	2	NA	Y	
1FH-BDR-WF	N	02537-010	IAL	14751	4/9/2020	945	EPA 200.8	4/14/2020	1738	3.42	2	NA	Y	
1FH-CAF1-WF	N	02537-012	IAL	14751	4/9/2020	950	EPA 200.8	4/14/2020	1742	ND	2	NA	Y	
1FO-CAF1-WF	N	02537-013	IAL	14751	4/9/2020	951	EPA 200.8	4/14/2020	1820	ND	2	NA	Y	
B1F-GBR-WF	N	02537-014	IAL	14751	4/9/2020	953	EPA 200.8	4/14/2020	1825	ND	2	NA	Y	
B1F-BBR-WF	N	02537-015	IAL	14751	4/9/2020	955	EPA 200.8	4/14/2020	1829	ND	2	NA	Y	
1F-HVAC-WF	N	02537-016	IAL	14751	4/9/2020	958	EPA 200.8	4/14/2020	1833	ND	2	NA	Y	
1F-MS-S	N	02537-017	IAL	14751	4/9/2020	1001	EPA 200.8	4/14/2020	1837	ND	2	NA	Y	
2F-ENT-WF-FILT	N	02537-018	IAL	14751	4/9/2020	1010	EPA 200.8	4/14/2020	1850	ND	2	NA	Y	
2F-GO-WF	N	02537-019	IAL	14751	4/9/2020	1012	EPA 200.8	4/14/2020	1854	ND	2	NA	Y	
2F-C205-WF	N	02537-020	IAL	14751	4/9/2020	1015	EPA 200.8	4/14/2020	1859	7.2	2	NA	Y	
2F-CAF-WF-FILT	N	02537-021	IAL	14751	4/9/2020	1022	EPA 200.8	4/14/2020	1916	ND	2	NA	Y	
2F-KS-1	N	02537-022	IAL	14751	4/9/2020	1020	EPA 200.8	4/14/2020	1958	3	2	NA	Y	
2F-KS-2	N	02537-023	IAL	14751	4/9/2020	1024	EPA 200.8	4/14/2020	2002	0.806	2	NA	Y	J
2F-B207-KS	N	02537-024	IAL	14751	4/9/2020	1026	EPA 200.8	4/14/2020	2006	ND	2	NA	Y	
2F-C200-WF	N	02537-025	IAL	14751	4/9/2020	1030	EPA 200.8	4/14/2020	2010	ND	2	NA	Y	
2F-D203-WF	N	02537-026	IAL	14751	4/9/2020	1032	EPA 200.8	4/14/2020	2015	ND	2	NA	Y	
2F-H33-WF	N	02537-027	IAL	14751	4/9/2020	1035	EPA 200.8	4/14/2020	2019	ND	2	NA	Y	
2F-H19-WF	N	02537-028	IAL	14751	4/9/2020	1038	EPA 200.8	4/14/2020	2032	ND	2	NA	Y	
1F-F108-WF	N	02537-029	IAL	14751	4/9/2020	1042	EPA 200.8	4/14/2020	2036	ND	2	NA	Y	
2F-F207-WF	N	02537-030	IAL	14751	4/9/2020	1047	EPA 200.8	4/14/2020	2040	0.832	2	NA	Y	J
2F-M0-L-WF	N	02537-031	IAL	14751	4/9/2020	1051	EPA 200.8	4/14/2020	2044	ND	2	NA	Y	
2F-M0-R-WF	N	02537-032	IAL	14751	4/9/2020	1053	EPA 200.8	4/14/2020	2122	ND	2	NA	Y	
1F-S3-L-WF	N	02537-033	IAL	14751	4/9/2020	1102	EPA 200.8	4/14/2020	2127	ND	2	NA	Y	
1F-S3-R-WF	N	02537-034	IAL	14751	4/9/2020	1100	EPA 200.8	4/14/2020	2131	ND	2	NA	Y	
1F-N0-L-WF	N	02537-035	IAL	14751	4/9/2020	1103	EPA 200.8	4/14/2020	2135	ND	2	NA	Y	
1F-N0-R-WF	N	02537-036	IAL	14751	4/9/2020	1105	EPA 200.8	4/14/2020	2139	ND	2	NA	Y	
1F-STEMBR-L-WF	N	02537-037	IAL	14751	4/9/2020	1109	EPA 200.8	4/14/2020	2144	ND	2	NA	Y	
1F-STEMBR-R-WF	N	02537-038	IAL	14751	4/9/2020	1111	EPA 200.8	4/14/2020	2148	ND	2	NA	Y	
2F-STEMBR-L-WF	N	02537-039	IAL	14751	4/9/2020	1115	EPA 200.8	4/14/2020	2152	ND	2	NA	Y	
2F-STEMBR-R-WF	N	02537-040	IAL	14751	4/9/2020	1117	EPA 200.8	4/14/2020	2156	ND	2	NA	Y	
STEM-KS1	N	02537-041	IAL	14751	4/9/2020	1120	EPA 200.8	4/14/2020	2312	ND	2	NA	Y	
STEM-KS2	N	02537-042	IAL	14751	4/9/2020	1122	EPA 200.8	4/14/2020	2346	ND	2	NA	Y	
STEM-KS3	N	02537-043	IAL	14751	4/9/2020	1124	EPA 200.8	4/14/2020	2359	ND	2	NA	Y	
STEM-KS4	N	02537-044	IAL	14751	4/9/2020	1126	EPA 200.8	4/15/2020	0003	0.876	2	NA	Y	J
STEM-KS5	N	02537-045	IAL	14751	4/9/2020	1128	EPA 200.8	4/15/2020	0007	2.2	2	NA	Y	
3F-STEMBR-L-WF	N	02537-046	IAL	14751	4/9/2020	1130	EPA 200.8	4/15/2020	0012	ND	2	NA	Y	
3F-STEMBR-R-WF	N	02537-047	IAL	14751	4/9/2020	1132	EPA 200.8	4/15/2020	0016	ND	2	NA	Y	
HX-AUTO-WF	N	02537-048	IAL	14751	4/9/2020	1134	EPA 200.8	4/15/2020	0020	ND	2	NA	Y	
HHX-H107-WF	N	02537-049	IAL	14751	4/9/2020	1135	EPA 200.8	4/15/2020	0024	ND	2	NA	Y	
HX-AB-WF1	N	02537-050	IAL	14751	4/9/2020	1137	EPA 200.8	4/15/2020	0029	ND	2	NA	Y	
HX-AB-WF2	N	02537-051	IAL	14751	4/9/2020	1140	EPA 200.8	4/15/2020	0033	1.12	2	NA	Y	J
TRB-WF	N	02537-052	IAL	14751	4/9/2020	1148	EPA 200.8	4/15/2020	111	ND	2	NA	Y	
RIF-N122-WF	N	02537-053	IAL	14751	4/9/2020	1150	EPA 200.8	4/15/2020	115	1.28	2	NA	Y	J
R1F-KS1	N	02537-054	IAL	14751	4/9/2020	1152	EPA 200.8	4/15/2020	119	ND	2	NA	Y	
R1F-KS2	N	02537-055	IAL	14751	4/9/2020	1154	EPA 200.8	4/15/2020	124	ND	2	NA	Y	
R1F-KS3	N	02537-056	IAL	14751	4/9/2020	1156	EPA 200.8	4/15/2020	128	2.98	2	NA	Y	
1RFH-ENT-WF	N	02537-057	IAL	14751	4/9/2020	1158	EPA 200.8	4/15/2020	141	ND	2	NA	Y	
R2F-ENT-WF	N	02537-058	IAL	14751	4/9/2020	1200	EPA 200.8	4/15/2020	145	5.43	2	NA	Y	
AC1-H-HOSE	N	02537-059	IAL	14751	4/9/2020	1215	EPA 200.8	4/15/2020	149	0.789	2	NA	Y	J
AC1-H-SINK	N	02537-060	IAL	14751	4/9/2020	1217	EPA 200.8	4/15/2020	153	ND	2	NA	Y	
AC1FH-OFF-LWF	N	02537-061	IAL	14751	4/9/2020	1219	EPA 200.8	4/15/2020	210	ND	2	NA	Y	
AC1FH-OFF-RWF	N	02537-062	IAL	14751	4/9/2020	1221	EPA 200.8	4/15/2020	253	ND	2	NA	Y	
AC2FH-LWF	N	02537-063	IAL	14751	4/9/2020	1223	EPA 200.8	4/15/2020	257	ND	2	NA	Y	
AC2FH-RWF	N	02537-064	IAL	14751	4/9/2020	1225	EPA 200.8	4/15/2020	301	ND	2	NA	Y	
AC-OUT-HOSE	N	02537-065	IAL	14751	4/9/2020	1230	EPA 200.8	4/15/2020	305	40.2	2	NA	Y	
ACFH-SINK	N	02537-066	IAL	14751	4/9/2020	1235	EPA 200.8	4/15/2020	310	4.1	2	NA	Y	
ACFH-HOSE	N	02537-067	IAL	14751	4/9/2020	1240	EPA 200.8	4/15/2020	322	47.2	2	NA	Y	
FB	N	02537-068	IAL	14751	4/9/2020	915	EPA 200.8	4/15/2020	326	ND	2	NA	Y	
AC-OUT-HOSE-FLUSH	N	02812-001	IAL	14751	4/23/2020	915	EPA 200.8	4/29/2020	750	ND	2	NA	Y	
ACFH-HOSE-FLUSH	N	02812-002	IAL	14751	4/23/2020	920	EPA 200.8	4/29/2020	828	ND	2	NA	Y	
ACFH-WF	N	02812-003	IAL	14751	4/23/2020	925	EPA 200.8	4/29/2020	832	1.70	2	NA	Y	J