



Accredited Environmental Technologies, Inc.

LEAD IN DRINKING WATER TESTING REPORT

**CENTRAL AVENUE MIDDLE SCHOOL
72 CENTRAL AVENUE
NEWARK, NEW JERSEY 07102**

**Testing Conducted By: Accredited Environmental Technologies,
Inc.**

**Client: Uncommon Schools
826 Broadway, 9th Floor
New York, NY 10003**

**Contact: Mr. Sabin Ciocan
Associate Director of Real Estate & Facilities**

AET Project #: 4-17-11971

**Date of Testing: April 22, 2017 (Initial)
July 13, 2017 (Flush)**

**Date of Report: June 8, 2017 – Draft
October 3, 2017 – Final**

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Accredited Environmental Technologies, Inc.

EXECUTIVE SUMMARY

In April 2017, Accredited Environmental Technologies, Inc. (AET) was contracted by Uncommon Schools (“Client”) to conduct lead in drinking water testing at 7 designated school buildings. Samples were collected from all accessible drinking water outlets (water fountains, sinks, coffee water lines, showers, exterior spigots and specialty taps) located within each school. AET’s services were performed in accordance with AET’s Proposal #9379 dated 3/29/17.

This report documents the results of drinking water testing conducted at Central Avenue Middle School in accordance with EPA’s Lead Safe Drinking Water Standards (3T’s for reducing lead in drinking water in schools) and NJAC 6A:26-1.2 and 12.4. Testing was conducted on 4/22/17 at 36 outlets (see attached Table 1 – sampling data form and recommendations) designated by the client or clients representative. Sampling was conducted on 36 designated testing locations for first draw samples (second draw samples were collected when required when lead in drinking water exceeded EPA Guidance >15ppb). Samples were collected utilizing 250ml plastic bottles and transported directly to EMSL Analytical in Cinnaminson, New Jersey. Samples were analyzed by EPA Method 200.9. This report includes both the initial testing data and subsequent 30 second flush sampling performed after implementation of corrective measures. Samples were analyzed by EMSL Analytical.

Water Sourcing: Water sourcing can be found in the supplemental plumbing profile for the Central Avenue Middle School.

CONCLUSION

Based on the sampling performed within the 36 testing locations, drinking water results were below the EPA Lead Safe Drinking Water action limit of 15 ppb, in all but 2 outlets. Lead concentrations from the tested water outlets (which were below 15 ppb) ranged from <3.00 ppb to 14.2 ppb. Of the 36 tested locations 23 outlets were reported as below the laboratories detection limit (none detect). Flush sampling was conducted 7/13/17, results from the testing were below the analytical detection limit. Corrective measures and recommendations can be found within Table 1 (sampling data form and recommendations) of this report.

Restrictions/Limitations: Drinking water sampling was performed at previously identified Client locations. Sampling was performed within the 8-48 hour window of inactivity. AET was met at each school facility by a member of the maintenance staff who identified specific outlets for testing. All samples collected were first draw samples in accordance with the Lead-Safe Drinking Water Standard. No aerators, screens, filters were removed prior to or during sampling.

Lead testing results are representative of conditions including frequency of use of drinking water outlets at the time of testing (snapshot in time). Infrequent use or prolonged contact time of water in the piping system (where lead is present) can result in higher lead levels.

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METHODS

Lead in Drinking Water Testing was conducted in accordance with EPA's Lead Safe Drinking Water Standards and in accordance with NJAC 6A:26-1.2 and 12.4. Samples collected were both first draw samples per the EPA Lead in Drinking Water in Schools Standard, 5-minute and 30 second flush sampling. Samples were collected from the cold water outlet after drinking water was static in the plumbing system for at least 8 hours but no more than 48 hours. Samples were collected during non-occupancy of the school. Aerators were not removed from the outlet fixtures prior to testing.

Each sample was collected utilizing a 250ml plastic bottle. Water samples obtained were filled to the bottles shoulder and were individually capped for laboratory transport. Documentation for each sample and sample location was maintained on a Lead Sampling Log and included the following information:

- School Name
- Sample Type (First Draw or Flush)
- Collection Date and Time
- Sample Location/Outlet with Assigned Sample Number

Samples were directly transported to EMSL Analytical in Cinnaminson, NJ. Samples were analyzed by EPA Method 200.9.

STANDARDS

The EPA's Lead Safe Drinking Water Standard (3T's for Reducing Lead in Drinking Water in Schools) was designed to protect public health within school buildings by implementing testing procedures to document lead levels within drinking water. Standards were developed to ascertain potential corrosion of plumbing materials, which can contain lead, and to determine the extent of lead concentrations within the water distribution system.

Materials which may be present within the water distribution system may include but are not limited to; lead-based solder, brass and chrome-plated faucets (not designated as lead free), and lead piping connected from the main to the buildings water system. In 1986, Congress banned the use of lead solder containing greater than 0.2% lead and restricted the lead content in faucets, pipes, and other plumbing materials to 8.0%. The EPA's Lead Safe Drinking Water Standards are a component of the EPA Safe Drinking Water Act (40 CFR Part 141) which established an action limit of 15 ppb for lead.

The EPA has developed a process for reducing lead in drinking water in schools. This program requires schools to implement simple strategies for managing health risks of lead in school drinking water including:

- **Training** to identify potential sources of lead in the facilities and establish a testing plan.
- **Testing** to monitor school drinking water for elevated lead levels and take corrective actions (where necessary)
- **Telling** to communicate student, parents, and staff testing results and remediation actions taken.

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The EPA 3T Program recommends a two-step sampling process to identify lead concentrations in drinking water within schools.

- **Step 1** - Initial first draw sampling of cold water outlets, designated for consumption.
- **Step 2**- Follow-up flush sampling of cold water outlets where initial sampling results exceed 15ppb. Flush samples are utilized to determine if the lead concentrations found are from the fixture or from the interior feed piping. Flush samples are collected from the outlet after the water has run for 30 seconds.

RECOMMENDED INTERIM CONTROLS –LEAD IN WATER LEVELS BELOW 15ppb

AET recommends the following procedures be followed where lead levels have been documented within school drinking water outlets in order to maintain lead levels below 15ppb.

1. Establishment of a water outlet cleaning maintenance schedule to include but not limited to the following;
 - Installation of aerators (screening) on water outlets designated for consumption.
 - Establishment of a cleaning schedule for newly installed aerators and previously installed aerators.
 - Implementation of follow-up water testing on serviced or repaired water outlets designated for consumption. Follow-up testing should be conducted prior to reestablishment of the source as a consumable water source.
2. Use only cold water for food and beverage preparation. If hot water is needed, it should be taken from the cold water tap and heated in the stove or microwave oven.
3. Purging of consumable water sources prior to ingestion. In given cases staffing and control documents can be provided to instruct proper procedures to reduce lead concentrations within static piping.
4. Documentation on bathroom walls that water should not be consumed.

INTERIM CONTROLS – LEAD IN WATER LEVELS ABOVE 15ppb

For Informational Purposes Only

Stop gap measures where interim control measures must be implemented in order to reduce lead in drinking water exceeds 15ppb are as follows:

1. Flushing of the piping system in the affected areas prior to student attendance each morning. Documentation of the effectiveness of purging the water system within elevated lead in water areas must be documented.
2. Designation of water source(s) as not for consumption and provisions of bottle water to be supplied until repair or replacement of components can be conducted.
3. Removal of water source from the system and its entirety.

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NJAC 6A:26-1.2 and 12.4 - Testing for lead in drinking water – All Educational Facilities

Based on possible exposure to lead contaminated drinking water and its potential to pose serious health problems, particularly in children, staff and school personnel, the State of New Jersey has adopted special amendments for the testing of lead in drinking water for all educational facilities. These special amendments require districts to sample and analyze all drinking water in their educational facilities within 365 days of the effective date of July 13, 2017. Testing is to be conducted in accordance with a defined lead sampling plan developed by the school district and within the requirements of the adopted amendments and the DEP. The guidance documents provided by the DEP listed as the 3 T's "EPA's Lead Safe Drinking Water Standard" and the State of New Jersey shall guide the sampling protocol and sampling plan.

Other provisions under the special amendments include requirements for disclosure and making sampling results publicly available to parents or guardians of school children attending the facility and the department. Districts are also required to conduct lead testing of all drinking water outlets at least every 6 years following the initial testing as well as after plumbing renovations which may impact leaded components within the plumbing system.

Reimbursement of the costs can be retrieved from the department under the guise that the district provides a reimbursement application which is located on the department's website. This reimbursement applies to both public and non public schools so long as the testing complies with state and federal requirements.

Appendix A (Sampling Data Form and Recommendations)

School Name	Address	Sample #	Location	Initial Result	5min Flush	30 sec Flush	Rec.
Central Avenue Middle School	72 Central Avenue	11971-CAMS-011-S001	Room 011-Kitchen Ground Floor	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-011-s002	Room 011-Kitchen Ground Floor	10.9 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-007-S003	Room 007- Women's Ground Floor	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-007-S004	Room 007- Women's Ground Floor	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-007-S005	Room 007- Women's Ground Floor	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-007-S006	Room 007- Women's Ground Floor	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-007-S007	Room 007- Women's Ground Floor	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-011-S008	Room 011-Men's Ground Floor	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-011-S009	Room 011-Men's Ground Floor	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-011-S010	Room 011-Men's Ground Floor	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-011-S011	Room 011-Men's Ground Floor	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-011-S012	Room 011-Men's Ground Floor	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-114-S013	Room 113- Office 1st Floor	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-112-S014	Room 112-Faculty Restroom 1st Floor	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-105-S015	Room 105- Faculty Restroom 1st Floor	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-212-S016	Room 212	3.68 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-211-S017	Room 211	3.20 ppb			
Central Avenue Middle School	72 Central Avenue	1197 1 -CAMS-208-SO 1 8	Room 208	5.91 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-207-S019	Room 207 girls room	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-207-S020	Room 207 girls room	4.18 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-315-S021	Room 315 restroom	5.81 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-312-S022	Room 312 restroom	22.5 ppb		<3.00 ppb	
Central Avenue Middle School	72 Central Avenue	11971-CAMS-311-S023	Classroom 311	<3.00 ppb			

Appendix A (Sampling Data Form and Recommendations)							
School Name	Address	Sample #	Location	Initial Result	5 min Flush	30 sec Flush	Rec.
Central Avenue Middle School	72 Central Avenue	11971-CAMS-307-S024	Room 307 custodial closet	14.2 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-307-S025	Room 307 boys room	3.76 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-307-S026	Room 307 boys room	4.73 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-005-WF001	Room 005 corridor outside of bathroom in basement	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-005-WF002	Room 005 corridor outside of bathroom in basement	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-005-WF003	Room 005 corridor outside of bathroom in basement	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-005-WF004	Room 005 corridor outside of bathroom in basement	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-208-WF005	Room 208	3.68 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-208-WF006	Room 208	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-308-WF007	Room 308	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-308-WF008	Room 308	<3.00 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-212-CWL001	Room 212	14.0 ppb			
Central Avenue Middle School	72 Central Avenue	11971-CAMS-SPKL-M001	Ground floor sprinkler room	1,491 ppb			

<p><u>Recommendation Codes</u></p> <p>1 - Replace</p> <p>2 - Flush before use</p> <p>3 - Other</p> <p>4 - No necessary response action</p>
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EMSL Analytical, Inc.

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<http://www.EMSL.com> cinnaminsonleadlab@emsl.com

EMSL Order: 201703850
CustomerID: ACCR50
CustomerPO:
ProjectID:

Attn: **Eric Sutherland**
Accredited Environmental Tech (AET)
28 North Pennell Road
Media, PA 19063

Phone: (610) 891-0114
Fax: (610) 891-0559
Received: 04/24/17 9:00 AM
Collected:

Project: 11971

Test Report: Lead in Water by Furnace AAS (EPA 200.9)

Client Sample Description	Lab ID	Collected	Analyzed	Lead Concentration
CAMS-011-S001	201703850-0001		4/26/2017	<3.00 ppb
	Site: Rm 011-Kitchen Ground FL			
CAMS-011-S002	201703850-0002		4/26/2017	10.9 ppb
	Site: Rm 011-Kitchen Ground FL			
CAMS-007-S003	201703850-0003		4/26/2017	<3.00 ppb
	Site: Rm 007- Women's Ground FL			
CAMS-007-S004	201703850-0004		4/27/2017	<3.00 ppb
	Site: Rm 007- Women's Ground FL			
CAMS-007-S005	201703850-0005		4/27/2017	<3.00 ppb
	Site: Rm 007- Women's Ground FL			
CAMS-007-S006	201703850-0006		4/27/2017	<3.00 ppb
	Site: Rm 007- Women's Ground FL			
CAMS-007-S007	201703850-0007		4/27/2017	<3.00 ppb
	Site: Rm 007- Women's Ground FL			
CAMS-011-S008	201703850-0008		4/27/2017	<3.00 ppb
	Site: Rm 011- Men's Ground FL			
CAMS-011-S009	201703850-0009		4/27/2017	<3.00 ppb
	Site: Rm 011- Men's Ground FL			
CAMS-011-S010	201703850-0010		4/27/2017	<3.00 ppb
	Site: Rm 011- Men's Ground FL			
CAMS-011-S011	201703850-0011		4/27/2017	<3.00 ppb
	Site: Rm 011- Men's Ground FL			
CAMS-011-S012	201703850-0012		4/27/2017	<3.00 ppb
	Site: Rm 011- Men's Ground FL			
CAMS-114-S013	201703850-0013		4/27/2017	<3.00 ppb
	Site: Rm 114- Office 1st FL			
CAMS-112-S014	201703850-0014		4/27/2017	<3.00 ppb
	Site: Rm 112- Faculty Restroom 1st FL			
CAMS-105-S015	201703850-0015		4/27/2017	<3.00 ppb
	Site: Rm 105- Faculty Restroom 1st FL			

Phillip Worby, Lead Laboratory Manager
or other approved signatory

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Initial report from 05/01/2017 14:59:35



EMSL Analytical, Inc.

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Received: 04/24/17 9:00 AM
Collected:

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Client Sample Description	Lab ID	Collected	Analyzed	Lead Concentration
CAMS-212-S016	201703850-0016		4/27/2017	3.68 ppb
	Site: Rm 212- Faculty Room 2nd FL			
CAMS-211-S017	201703850-0017		4/27/2017	3.20 ppb
	Site: Rm 211- Classroom 2nd FL			
CAMS-208-S018	201703850-0018		4/27/2017	5.91 ppb
	Site: Rm 208- Custodial Closet 2nd FL			
CAMS-207-S019	201703850-0019		4/27/2017	<3.00 ppb
	Site: Rm 207- Girls Room 2nd FL			
CAMS-207-S020	201703850-0020		4/27/2017	4.18 ppb
	Site: Rm 207- Girls Room 2nd FL			
CAMS-315-S021	201703850-0021		4/27/2017	5.81 ppb
	Site: Rm 315- Restroom 3rd FL			
CAMS-312-S022	201703850-0022		4/27/2017	22.5 ppb
	Site: Rm 312- Restroom 3rd FL			
CAMS-311-S023	201703850-0023		4/27/2017	<3.00 ppb
	Site: Rm 311- Classroom 3rd FL			
CAMS-307-S024	201703850-0024		4/27/2017	14.2 ppb
	Site: Rm 307- Custodial Closet 3rd FL			
CAMS-307-S025	201703850-0025		4/27/2017	3.76 ppb
	Site: Rm 307- Boy's Room 3rd FL			
CAMS-307-S026	201703850-0026		4/27/2017	4.73 ppb
	Site: Rm 307- Boy's Room 3rd FL			
CAMS-005-WF001	201703850-0027		4/27/2017	<3.00 ppb
	Site: Rm 005-Corridor Outside of Bathroom in Basement/ Ground FL			
CAMS-005-WF002	201703850-0028		4/27/2017	<3.00 ppb
	Site: Rm 005-Corridor Outside of Bathroom in Basement/ Ground FL			
CAMS-005-WF003	201703850-0029		4/27/2017	<3.00 ppb
	Site: Rm 005-Corridor Outside of Bathroom in Basement/ Ground FL			
CAMS-005-WF004	201703850-0030		4/27/2017	<3.00 ppb
	Site: Rm 005-Corridor Outside of Bathroom in Basement/ Ground FL			

Phillip Worby, Lead Laboratory Manager
or other approved signatory

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Initial report from 05/01/2017 14:59:35



EMSL Analytical, Inc.

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<http://www.EMSL.com> cinnaminsonleadlab@emsl.com

EMSL Order: 201703850
CustomerID: ACCR50
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ProjectID:

Attn: **Eric Sutherland**
Accredited Environmental Tech (AET)
28 North Pennell Road
Media, PA 19063

Phone: (610) 891-0114
Fax: (610) 891-0559
Received: 04/24/17 9:00 AM
Collected:

Project: 11971

Test Report: Lead in Water by Furnace AAS (EPA 200.9)

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Lead Concentration</i>
CAMS-208-WF005	201703850-0031		4/27/2017	3.68 ppb
	Site: Rm 208- Double Stairwell 2nd FL			
CAMS-208-WF006	201703850-0032		4/27/2017	<3.00 ppb
	Site: Rm 208- Double Stairwell 2nd FL			
CAMS-308-WF007	201703850-0033		4/27/2017	<3.00 ppb
	Site: Rm 308- Double Stairwell 3rd FL			
CAMS-308-WF008	201703850-0034		4/27/2017	<3.00 ppb
	Site: Rm 308- Double Stairwell 3rd FL			
CAMS-212-CWL001	201703850-0035		4/27/2017	14.0 ppb
	Site: Rm 212- Faculty Room 2nd FL			
CAMS-SPKL-M001	201703850-0036		5/1/2017	1491 ppb
	Site: Sprinkler Room Ground FL			

Phillip Worby, Lead Laboratory Manager
or other approved signatory

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CustomerID: ACCR50
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28 North Pennell Road
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Phone: (610) 891-0114
Fax: (610) 891-0559
Received: 07/13/17 1:10 PM
Collected: 7/13/2017

Project: #11971

Test Report: Lead in Water by Furnace AAS (EPA 200.9)

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Lead Concentration</i>
CAMS-312-S022F	201706913-0001	7/13/2017	7/13/2017	<3.00 ppb
	Site: RM. 312			

Phillip Worby, Lead Laboratory Manager
or other approved signatory

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Initial report from 07/17/2017 14:42:46