

DRINKING WATER SAMPLING REPORT

for

**VIRGINIA COMMUNITY UNIT SCHOOL
DISTRICT #64
651 SOUTH MORGAN STREET
VIRGINIA, ILLINOIS 62691**

at

VIRGINIA ELEMENTARY SCHOOL

prepared by

Reliable
Environmental
Solutions, Inc. **RES**
4211 Westgate Drive, Springfield, IL 62711
217.787.9800 ♦ 217.787.9801 FAX
www.ReliableEnv.com

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INTRODUCTION

I. SCOPE

Reliable Environmental Solutions, Inc. (RES) performed sampling of drinking water for the presence of lead at Virginia CUSD #64. A waiver was requested for previous testing completed on October 20, 2016. The waiver was rejected by the Illinois Department of Public Health (IDPH) on August 24, 2017 because the laboratory analysis that was completed for lead was not an approved method.

Testing on April 25, 2017 was completed to supplement testing on October 20, 2016. After the waiver was rejected, additional samples were collected on September 26, 2017. This report includes only sampling data from April 25, 2017 and September 26, 2017.

Public Act 99-0922 requires all schools with students fifth grade and under built before January 1, 1987 to test sources used for drinking water or used in food preparation by December 31, 2017. Schools built between January 1, 1987 and January 1, 2000 must complete testing by December 31, 2018. Testing must also include sinks in classrooms with children under first grade.

The water sampling was performed to document that building occupants' exposures to lead in drinking water. The Illinois Department of Public Health (IDPH) requires notification to parents and guardians of students for samples that are greater than or equal to 5 parts per billion (ppb) or 5 micrograms per Liter ($\mu\text{g/L}$). The Environmental Protection Agency (EPA) has set an action level of 15 parts per billion (ppb) or 15 micrograms per Liter ($\mu\text{g/L}$) for public water supplies.

II. SAMPLING PROTOCOL

Samples were collected from drinking fountains and sinks from the "first-draw" sample. The "first-draw" or "A" sample represents the worst-case scenario where water has remained stagnant in fixtures between 8 and 18 hours. A "second-draw" or "B" sample is taken after the water to the sink or drinking fountain has ran for 30 seconds. This sample tests water that has set in service pipes between 8 and 18 hours. Sinks and drinking fountains that have multiple fixtures that share the same drain only need a first-draw sample from each additional fixture. The laboratory provided clean 250cc plastic sampling containers for sample collection. Credentials of the licensed Lead Risk Assessor conducting the sampling are included in Section 5 of this report. Sample locations are documented on drawings in Section 3 of this report.

III. ANALYSIS PROTOCOL

Samples were analyzed at Prairie Analytical Systems, Inc., 1210 Capital Airport Drive, Springfield, Illinois. Prairie Analytical Systems, Inc. is a State of Illinois Environmental Protection Agency accredited laboratory for drinking water sample analysis. Samples were analyzed per the USEPA 200.8 method. The laboratory results can be found in Section 4 of this report. The laboratory credentials can also be found in Section 4 of this report.

IV. MITIGATION STRATEGIES

Mitigation strategies depend on many variables and school districts may need to implement various and multiple steps to mitigate lead-in-water hazards. School districts should develop an effective Water Quality Management Plan (WQMP) to ensure that safe, potable drinking water is maintained in their buildings at all times. The principal goal of a WQMP is to flush an adequate amount of water through the plumbing systems of the buildings on a regular basis to maintain a fresh (safe) drinking water supply. The Illinois Department of Public Health (IDPH) has released a guidance document for mitigating lead in schools titled *“Mitigation Strategies for Lead Found in School Drinking Water.”* A copy of this guidance document is located in Appendix A of this report.

V. WATER SAMPLING SUMMARY

VIRGINIA ELEMENTARY SCHOOL

Water samples were collected from the kitchen sinks and band room sink on April 25, 2017. Lead was detected in both kitchen sinks and band room sinks. IDPH recommends implementing a flushing program and replacing the sink fixtures that tested positive for lead. Once replaced, the fixture should be retested. The use of filters to remove lead is also an option instead of replacement. IDPH recommendations can be found in their guidance document located in Appendix A. A summary of findings can be found in Section 2 of this report.

Water samples were collected from the drinking fountains and the men’s and women’s locker room sinks on September 26, 2017. All drinking fountains tested negative for lead. Lead was detected in both men’s and women’s locker room sinks. Both of these sinks have been replaced since testing on them on October 20, 2016. IDPH recommends implementing a flushing program since these sinks have been replaced. The use of filters to remove lead is also an option. IDPH recommendations can be found in their guidance document located in Appendix A. A summary of findings can be found in Section 2 of this report.

**VIRGINIA CUSD #64
VIRGINIA ELEMENTARY SCHOOL
651 S. MORGAN STREET
VIRGINIA, IL 62691**

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Wednesday, May 17, 2017

Bill Williams

Reliable Environmental Services, Inc.

4211 Westgate Drive

Springfield, IL 62711

TEL: (217) 789-9800

FAX: (217) 787-9801

RE: Virginia CUSD #64/ Virginia Elementary School

PAS WO: 17D0616

Prairie Analytical Systems, Inc. received 5 sample(s) on 4/25/2017 for the analyses presented in the following report.

All applicable quality control procedures met method specific acceptance criteria unless otherwise noted.

This report shall not be reproduced, except in full, without the prior written consent of Prairie Analytical Systems, Inc.

If you have any questions, please feel free to contact me at (224) 253-1348.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Christina E. Pierce".

Christina E. Pierce

Project Manager

Certifications:

NELAP/NELAC - IL #100323

1210 Capital Airport Drive	*	Springfield, IL 62707	*	1.217.753.1148	*	1.217.753.1152 Fax
9114 Virginia Road Suite #112	*	Lake in the Hills, IL 60156	*	1.847.651.2604	*	1.847.458.0538 Fax

LABORATORY RESULTS

Client: Reliable Environmental Services, Inc.

Project: Virginia CUSD #64/ Virginia Elementary School

Lab Order: 17D0616

Case Narrative

All samples were collected in 250 mL bottles.

The plumbing system associated with these samples was last used on 4/24/17 at 1500.

LABORATORY RESULTS

Client: Reliable Environmental Services, Inc.
Project: Virginia CUSD #64/ Virginia Elementary School
Client Sample ID: VES-1A
Collection Date: 4/25/17 7:05

Lab Order: 17D0616
Lab ID: 17D0616-01
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	3.14	2.00		µg/L	1	5/12/17 14:22	5/13/17 13:15	EPA200.8	JTC

Client Sample ID: VES-1B
Collection Date: 4/25/17 7:05

Lab ID: 17D0616-02
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	U	2.00		µg/L	1	5/12/17 14:22	5/13/17 13:20	EPA200.8	JTC

Client Sample ID: VES-2A
Collection Date: 4/25/17 7:06

Lab ID: 17D0616-03
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	6.83	2.00		µg/L	1	5/12/17 14:22	5/13/17 13:24	EPA200.8	JTC

Client Sample ID: VES-3A
Collection Date: 4/25/17 7:12

Lab ID: 17D0616-04
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	68.4	2.00		µg/L	1	5/10/17 10:35	5/12/17 17:26	EPA200.8	JTC

Client Sample ID: VES-3B
Collection Date: 4/25/17 7:12

Lab ID: 17D0616-05
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	12.0	2.00		µg/L	1	5/10/17 10:35	5/12/17 17:30	EPA200.8	JTC

LABORATORY RESULTS

Client: Reliable Environmental Services, Inc.

Project: Virginia CUSD #64/ Virginia Elementary School

Lab Order: 17D0616

Notes and Definitions

* NELAC certified compound.

U Analyte not detected (i.e. less than RL or MDL).

Central IL - 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
Chicago IL Office - 9114 Virginia Rd., Ste 112 - Lake in the Hills, IL 60156 - Phone (847) 651-2604 - Facsimile (847) 458-9680
Central/Southern IL Office - Phone (217) 414-7762 - Facsimile (217) 223-7922



Analytical
Systems, INCORPORATED

www.prairieanalytical.com

[illegible]



Wednesday, October 25, 2017

Bill Williams

Reliable Environmental Services, Inc.

4211 Westgate Drive

Springfield, IL 62711

TEL: (217) 787-9800

FAX: (217) 787-9801

RE: Virginia CUSD #64/ Virginia Elementary School

PAS WO: 1710770

Prairie Analytical Systems, Inc. received 14 sample(s) on 9/29/2017 for the analyses presented in the following report.

All applicable quality control procedures met method specific acceptance criteria unless otherwise noted.

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If you have any questions, please feel free to contact me at (224) 253-1348.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Christina E. Pierce".

Christina E. Pierce

Project Manager

Certifications:

NELAP/NELAC - IL #100323

1210 Capital Airport Drive	*	Springfield, IL 62707	*	1.217.753.1148	*	1.217.753.1152 Fax
9114 Virginia Road Suite #112	*	Lake in the Hills, IL 60156	*	1.847.651.2604	*	1.847.458.0538 Fax

LABORATORY RESULTS

Client: Reliable Environmental Services, Inc.
Project: Virginia CUSD #64/ Virginia Elementary School
Client Sample ID: VES-4-A
Collection Date: 9/26/17 6:15

Lab Order: 17I0770
Lab ID: 17I0770-01
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	U	2.00		µg/L	1	10/23/17 8:02	10/23/17 17:12	EPA200.8	KSH

Client Sample ID: VES-4-B
Collection Date: 9/26/17 6:15

Lab ID: 17I0770-02
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	U	2.00		µg/L	1	10/23/17 8:02	10/23/17 17:14	EPA200.8	KSH

Client Sample ID: VES-5-A
Collection Date: 9/26/17 6:20

Lab ID: 17I0770-03
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	U	2.00		µg/L	1	10/23/17 8:02	10/23/17 17:17	EPA200.8	KSH

Client Sample ID: VES-5-B
Collection Date: 9/26/17 6:20

Lab ID: 17I0770-04
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	U	2.00		µg/L	1	10/23/17 8:02	10/23/17 17:20	EPA200.8	KSH

Client Sample ID: VES-6-A
Collection Date: 9/26/17 6:20

Lab ID: 17I0770-05
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	U	2.00		µg/L	1	10/23/17 8:02	10/23/17 17:23	EPA200.8	KSH

Client Sample ID: VES-6-B
Collection Date: 9/26/17 6:20

Lab ID: 17I0770-06
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	U	2.00		µg/L	1	10/23/17 8:02	10/23/17 17:26	EPA200.8	KSH

LABORATORY RESULTS

Client: Reliable Environmental Services, Inc.
Project: Virginia CUSD #64/ Virginia Elementary School
Client Sample ID: VES-7-A
Collection Date: 9/26/17 6:25

Lab Order: 17I0770
Lab ID: 17I0770-07
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	U	2.00		µg/L	1	10/23/17 8:02	10/23/17 17:29	EPA200.8	KSH

Client Sample ID: VES-7-B
Collection Date: 9/26/17 6:25

Lab ID: 17I0770-08
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	U	2.00		µg/L	1	10/23/17 8:02	10/23/17 17:32	EPA200.8	KSH

Client Sample ID: VES-8-A
Collection Date: 9/26/17 6:27

Lab ID: 17I0770-09
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	U	2.00		µg/L	1	10/23/17 8:02	10/23/17 17:35	EPA200.8	KSH

Client Sample ID: VES-8-B
Collection Date: 9/26/17 6:27

Lab ID: 17I0770-10
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	U	2.00		µg/L	1	10/23/17 8:02	10/23/17 17:37	EPA200.8	KSH

Client Sample ID: VES-9-A
Collection Date: 9/26/17 6:30

Lab ID: 17I0770-11
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	27.6	2.00		µg/L	1	10/23/17 8:02	10/23/17 17:58	EPA200.8	KSH

Client Sample ID: VES-9-B
Collection Date: 9/26/17 6:30

Lab ID: 17I0770-12
Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	2.38	2.00		µg/L	1	10/23/17 8:02	10/23/17 18:00	EPA200.8	KSH

LABORATORY RESULTS

Client: Reliable Environmental Services, Inc.

Project: Virginia CUSD #64/ Virginia Elementary School

Lab Order: 17I0770

Client Sample ID: VES-10-A

Lab ID: 17I0770-13

Collection Date: 9/26/17 6:32

Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	140	2.00		µg/L	1	10/23/17 8:13	10/23/17 19:55	EPA200.8	KSH

Client Sample ID: VES-10-B

Lab ID: 17I0770-14

Collection Date: 9/26/17 6:32

Matrix: Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
*Lead	2.01	2.00		µg/L	1	10/23/17 8:02	10/23/17 18:03	EPA200.8	KSH

LABORATORY RESULTS

Client: Reliable Environmental Services, Inc.

Project: Virginia CUSD #64/ Virginia Elementary School

Lab Order: 17I0770

Notes and Definitions

* NELAC certified compound.

U Analyte not detected (i.e. less than RL or MDL).

Chain of Custody Record

Central IL - 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
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 Central/Southern IL Office - Phone (217) 414-7762 - Facsimile (217) 223-7922

Client		Reliable Environmental Solutions, Inc.				Analysis and/or Method Requested		Reporting	
Address		4211 Westgate Drive						☐ Resid ☐ Ind/Comm	
City, State, Zip Code		Springfield, IL 62711						☐ A ☐ D ☐ B ☐ E ☐ C ☐ F	
Phone / Facsimile		(217) 787-9800 fax (217) 787-9801						☐ Resid ☐ Indust	
Project Name / Number		Virginia CUSD #64						TACO	
Project Location		Virginia Elementary School						CALM	
P.O. # or Invoice To		Amy Williams						RISC	
Contact Person		Bill Williams						Sampler Comments	
Sample Description	Date	Sampling Time	Matrix Code	Preserv Code	No. of Containers	Sample Type	Lead		
VES-4-A	9/26/2017	6:15	DW		1	Comp	X		Cafeteria DF
VES-4-B	9/26/2017	6:15	DW		1	Grab	X		Cafeteria DF
VES-5-A	9/26/2017	6:20	DW		1		X		Hallway DF
VES-5-B	9/26/2017	6:20	DW		1		X		Hallway DF
VES-6-A	9/26/2017	6:20	DW		1		X		Hallway DF
VES-6-B	9/26/2017	6:20	DW		1		X		Hallway DF
VES-7-A	9/26/2017	6:25	DW		1		X		Hallway DF
VES-7-B	9/26/2017	6:25	DW		1		X		Hallway DF
VES-8-A	9/26/2017	6:27	DW		1		X		Hallway DF
VES-8-B	9/26/2017	6:27	DW		1		X		Band Room DF
VES-9-A	9/26/2017	6:30	DW		1		X		Band Room DF
VES-9-B	9/26/2017	6:30	DW		1		X		Men's LR Sink
Matrix Code	A - Aqueous		DW - Drinking Water		GW - Ground Water	NA - Non-Aqueous Liquid			
Preserv Code	0 - None		1 - HCl		2 - H2SO4	3 - HNO3		S - Solid	
Fulfilled By		Date		Time		Received By		Date	
Steven Honn		9/29/17		2:50 PM		[Signature]		9.29.17 1430	
Instructions:		Use 3:30 PM 9/25/17		Date Required:		Turnaround Time: Standard		QC Level	
						☒ Rush ☐ Standard		☐ 1 ☐ 2 ☐ 3 ☐ 4	
						On wet ice?		Temperature (°C)	
						Yes No		22.8	

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STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
NELAP - RECOGNIZED
ENVIRONMENTAL LABORATORY ACCREDITATION



is hereby granted to

PRAIRIE ANALYTICAL SYSTEMS, INCORPORATED

1210 CAPITAL AIRPORT DRIVE

SPRINGFIELD, IL 62707-8413

NELAP ACCREDITED

ACCREDITATION NUMBER #100323



According to the Illinois Administrative Code, Title 35, Subtitle A, Chapter II, Part 186, ACCREDITATION OF LABORATORIES FOR DRINKING WATER, WASTEWATER AND HAZARDOUS WASTES ANALYSIS, the State of Illinois formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed below.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part 186 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part 186. Please contact the Illinois EPA Environmental Laboratory Accreditation Program (IL ELAP) to verify the laboratory's scope of accreditation and accreditation status. Accreditation by the State of Illinois is not an endorsement or a guarantee of validity of the data generated by the laboratory.

Celeste M. Crowley
Acting Manager
Environmental Laboratory Accreditation Program

John South
Accreditation Officer
Environmental Laboratory Accreditation Program

Certificate No.: 004079
Expiration Date: 01/31/2018
Issued On: 02/15/2017

State of Illinois Environmental Protection Agency

Certificate No.: 004079

Awards the Certificate of Approval to:

Prairie Analytical Systems, Incorporated
1210 Capital Airport Drive
Springfield, IL 62707-8413

According to the Illinois Administrative Code, Title 35, Subtitle A, Chapter II, Part 186, ACCREDITATION OF LABORATORIES FOR DRINKING WATER, WASTEWATER AND HAZARDOUS WASTES ANALYSIS, the State of Illinois formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed below.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part 186 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part 186. Please contact the Illinois EPA Environmental Laboratory Accreditation Program (IL ELAP) to verify the laboratory's scope of accreditation and accreditation status. Accreditation by the State of Illinois is not an endorsement or a guarantee of validity of the data generated by the laboratory.

FOT Name: Drinking Water, Inorganic

Method: SM2130B,18Ed

Matrix Type: Potable Water

Turbidity

Method: SM2320B,18Ed

Matrix Type: Potable Water

Alkalinity

Method: SM2340B,18Ed

Matrix Type: Potable Water

Hardness

Method: SM4110B,18Ed

Matrix Type: Potable Water

Chloride

Fluoride

Nitrate

Nitrite

Orthophosphate as P

Sulfate

Method: SM4500CN-E,18Ed

Matrix Type: Potable Water

Cyanide

Method: SM4500H-B,18Ed

Matrix Type: Potable Water

Hydrogen ion (pH)

Method: SM5310C,20Ed

Matrix Type: Potable Water

Total Organic Carbon (TOC)

Method: USEPA150.1

Matrix Type: Potable Water

Hydrogen ion (pH)

Method: USEPA180.1

Matrix Type: Potable Water

Turbidity

State of Illinois
Environmental Protection Agency

Certificate No.: 004079

Awards the Certificate of Approval

Prairie Analytical Systems, Incorporated
1210 Capital Airport Drive
Springfield, IL 62707-8413

FOT Name: Drinking Water, Inorganic

Method: USEPA200.7R4.4

Matrix Type: Potable Water

Aluminum	Arsenic
Barium	Beryllium
Cadmium	Calcium
Chromium	Copper
Hardness (calc.)	Iron
Magnesium	Manganese
Nickel	Silver
Sodium	Zinc

Method: USEPA200.8R5.4

Matrix Type: Potable Water

Aluminum	Antimony
Arsenic	Barium
Beryllium	Cadmium
Chromium	Copper
Lead	Manganese
Mercury	Molybdenum
Nickel	Selenium
Silver	Thallium
Zinc	

Method: USEPA245.2

Matrix Type: Potable Water

Mercury

Method: USEPA300.0R2.1

Matrix Type: Potable Water

Chloride	Fluoride
Nitrate	Nitrite
Orthophosphate as P	Sulfate

FOT Name: Drinking Water, Organic

Method: USEPA524.2R4.1

Matrix Type: Potable Water

1,1,1-Trichloroethane	1,1,2-Trichloroethane
1,1-Dichloroethene	1,2,4-Trichlorobenzene
1,2-Dichlorobenzene	1,2-Dichloroethane

State of Illinois
Environmental Protection Agency

Certificate No.: 004079

Awards the Certificate of Approval

Prairie Analytical Systems, Incorporated
1210 Capital Airport Drive
Springfield, IL 62707-8413

FOT Name: Drinking Water, Organic

Method: USEPA524.2R4.1

Matrix Type: Potable Water

1,4-Dichlorobenzene

Bromodichloromethane

Carbon tetrachloride

Chlorodibromomethane

cis-1,2-Dichloroethene

Ethylbenzene

Naphthalene

Tetrachloroethene

Total trihalomethanes

Trichloroethylene

Xylenes (total)

1,2-Dichloropropane

Benzene

Bromoform

Chlorobenzene

Chloroform

Dichloromethane (Methylene chloride)

Methyl tert-butyl ether (MTBE)

Styrene

Toluene

trans-1,2-Dichloroethene

Vinyl chloride

FOT Name: Non Potable Water, Inorganic

Method: SM2130B,2001

Matrix Type: NPW/SCM

Turbidity

Method: SM2310B,1997

Matrix Type: NPW/SCM

Acidity

Method: SM2320B,1997

Matrix Type: NPW

Alkalinity

Method: SM2340B,1997

Matrix Type: NPW

Hardness

Method: SM2540B,1997

Matrix Type: NPW

Residue (Total)

Method: SM2540C,1997

Matrix Type: NPW

Residue (TDS)

Method: SM2540D,1997

Matrix Type: NPW

Residue (TSS)

State of Illinois
Environmental Protection Agency

Certificate No.: 004079

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Prairie Analytical Systems, Incorporated
1210 Capital Airport Drive
Springfield, IL 62707-8413

FOT Name: Non Potable Water, Inorganic

Method: SM3500Cr-B,2009

Matrix Type: NPW/SCM

Chromium VI

Method: SM4110B,2000

Matrix Type: NPW/SCM

Bromide

Chloride

Fluoride

Nitrate

Nitrate-Nitrite (as N)

Nitrite

Orthophosphate (as P)

Sulfate

Method: SM4500Cl-G,2000

Matrix Type: NPW

Chlorine, Total Residual

Method: SM4500CN-E,1999

Matrix Type: NPW

Cyanide

Method: SM4500H-B,2000

Matrix Type: NPW

Hydrogen Ion (pH)

Method: SM4500NH3-D,1997

Matrix Type: NPW/SCM

Ammonia

Total Kjeldahl Nitrogen

Method: SM4500NH3-G,1997

Matrix Type: NPW

Ammonia

Method: SM4500O-G,2001

Matrix Type: NPW

Oxygen - Dissolved

Method: SM4500P-E,1999

Matrix Type: NPW

Orthophosphate (as P)

Phosphorus

Method: SM4500P-F,1999

Matrix Type: NPW

Orthophosphate (as P)

Phosphorus

Method: SM4500S2-F,2000

Matrix Type: NPW/SCM

State of Illinois
Environmental Protection Agency

Certificate No.: 004079

Awards the Certificate of Approval

Prairie Analytical Systems, Incorporated
1210 Capital Airport Drive
Springfield, IL 62707-8413

FOT Name: Non Potable Water, Inorganic

Method: SM4500S2-F,2000

Matrix Type: NPW/SCM

Sulfide

Method: SM5210B,2001

Matrix Type: NPW

Biochemical Oxygen Demand (BOD)

Matrix Type: NPW/SCM

Carbonaceous Biochemical Oxygen Demand (CBOI)

Method: SM5220D,1997

Matrix Type: NPW

Chemical Oxygen Demand (COD)

Method: SM5310C,2000

Matrix Type: NPW

Total Organic Carbon (TOC)

Method: USEPA160.4,1971

Matrix Type: NPW

Residue (Volatile)

Method: USEPA1664A

Matrix Type: NPW

Oil and Grease

Method: USEPA180.1R2.0,1993

Matrix Type: NPW

Turbidity

Method: USEPA200.7,1994

Matrix Type: NPW/SCM

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

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FOT Name: Non Potable Water, Inorganic

Method: USEPA200.7,1994

Matrix Type: NPW/SCM

Titanium

Vanadium

Zinc

Method: USEPA200.8,1994

Matrix Type: NPW/SCM

Aluminum

Antimony

Arsenic

Barium

Beryllium

Boron

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

Method: USEPA245.2,1974

Matrix Type: NPW/SCM

Mercury

Method: USEPA300.0R2.1,1993

Matrix Type: NPW

Bromide

Chloride

Fluoride

Nitrate

Nitrate-Nitrite (as N)

Nitrite

Orthophosphate (as P)

Sulfate

Method: USEPA310.2,1974

Matrix Type: NPW

Alkalinity

Method: USEPA335.4R1.0,1993

Matrix Type: NPW/SCM

Cyanide

Method: USEPA350.1R2.0,1993

Matrix Type: NPW

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FOT Name: Non Potable Water, Inorganic

Method: USEPA350.1R2.0,1993

Matrix Type: NPW

Ammonia

Method: USEPA365.1R2.0,1993

Matrix Type: NPW

Orthophosphate (as P)

Phosphorus

Method: USEPA410.4R2.0,1993

Matrix Type: NPW

Chemical Oxygen Demand (COD)

Method: USEPA420.1,1978

Matrix Type: NPW

Phenolics

Method: USEPA420.4R1.0,1993

Matrix Type: NPW

Phenolics

FOT Name: Solid and Chemical Materials, Inorganic

Method: 1010A

Matrix Type: NPW/SCM

Ignitability

Method: 1311

Matrix Type: SCM

TCLP (Organic and Inorganic)

Method: 1312

Matrix Type: SCM

Synthetic Precipitation Leaching Procedure

Method: 6010B

Matrix Type: NPW/SCM

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Molybdenum

Nickel

Potassium

Selenium

Silver

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FOT Name: Solid and Chemical Materials, Inorganic

Method: 6010B

Matrix Type: NPW/SCM

Strontium

Tin

Vanadium

Sodium

Thallium

Titanium

Zinc

Method: 6020A

Matrix Type: NPW/SCM

Aluminum

Arsenic

Beryllium

Cadmium

Chromium

Copper

Lead

Manganese

Molybdenum

Potassium

Silver

Thallium

Zinc

Antimony

Barium

Boron

Calcium

Cobalt

Iron

Magnesium

Mercury

Nickel

Selenium

Sodium

Vanadium

Method: 7196A

Matrix Type: NPW/SCM

Chromium VI

Method: 7470A

Matrix Type: NPW

Mercury

Method: 7471B

Matrix Type: SCM

Mercury

Method: 9014

Matrix Type: NPW/SCM

Cyanide

Method: 9034

Matrix Type: NPW/SCM

Sulfides

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FOT Name: Solid and Chemical Materials, Inorganic

Method: 9040B

Matrix Type: NPW

Hydrogen Ion (pH)

Method: 9040C

Matrix Type: NPW

Hydrogen Ion (pH)

Method: 9045C

Matrix Type: SCM

Hydrogen Ion (pH)

Method: 9045D

Matrix Type: SCM

Hydrogen Ion (pH)

Method: 9056A

Matrix Type: NPW/SCM

Bromide

Chloride

Fluoride

Nitrate

Nitrite

Phosphate

Sulfate

Method: 9065

Matrix Type: NPW/SCM

Phenolics

Method: 9081

Matrix Type: NPW/SCM

Cation-exchange Capacity

Method: 9095A

Matrix Type: NPW/SCM

Paint Filter

FOT Name: Solid and Chemical Materials, Organic

Method: 8015B

Matrix Type: NPW/SCM

Gasoline range organics (GRO)

Method: 8081A

Matrix Type: NPW/SCM

4,4'-DDD

4,4'-DDE

4,4'-DDT

Aldrin

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FOT Name: Solid and Chemical Materials, Organic

Method: 8081A

Matrix Type: NPW/SCM

alpha-Chlordane

Chlordane - not otherwise specified

Dieldrin

Endosulfan II

Endrin

Endrin ketone

gamma-Chlordane

Heptachlor epoxide

Toxaphene

alpha-BHC

beta-BHC

delta-BHC

Endosulfan I

Endosulfan sulfate

Endrin aldehyde

gamma-BHC (Lindane)

Heptachlor

Methoxychlor

Method: 8082

Matrix Type: NPW/SCM

PCB-1016

PCB-1242

PCB-1254

PCB-1221

PCB-1248

PCB-1260

Method: 8260B

Matrix Type: NPW/SCM

1,1,1,2-Tetrachloroethane

1,1,2,2-Tetrachloroethane

1,1-Dichloroethane

1,1-Dichloropropene

1,2,3-Trichloropropane

1,2,4-Trimethylbenzene

1,2-Dibromoethane (EDB)

1,2-Dichloroethane

1,3,5-Trimethylbenzene

1,3-Dichloropropane

2,2-Dichloropropane

2-Chloroethyl vinyl ether

2-Hexanone

4-Methyl-2-pentanone (Methyl isobutyl ketone, MIBK)

Acetonitrile

Acrylonitrile

Bromobenzene

1,1,1-Trichloroethane

1,1,2-Trichloroethane

1,1-Dichloroethene

1,2,3-Trichlorobenzene

1,2,4-Trichlorobenzene

1,2-Dibromo-3-chloropropane (DBCP)

1,2-Dichlorobenzene

1,2-Dichloropropane

1,3-Dichlorobenzene

1,4-Dichlorobenzene

2-Butanone (Methyl ethyl ketone, MEK)

2-Chlorotoluene

4-Chlorotoluene

Acetone

Acrolein (Propenal)

Benzene

Bromochloromethane

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FOT Name: Solid and Chemical Materials, Organic

Method: 8260B

Matrix Type: NPW/SCM

Bromoform
Carbon disulfide
Chlorobenzene
Chloroethane
Chloromethane
cis-1,3-Dichloropropene
Dichlorodifluoromethane
Ethylbenzene
Isopropylbenzene
Naphthalene
n-Propylbenzene
sec-Butylbenzene
tert-Butylbenzene
Toluene
trans-1,3-Dichloropropene
Trichlorofluoromethane
Vinyl chloride

Bromodichloromethane
Bromomethane
Carbon tetrachloride
Chlorodibromomethane (Dibromochloromethane)
Chloroform
cis-1,2-Dichloroethene
Dibromomethane
Dichloromethane (Methylene chloride)
Hexachlorobutadiene
Methyl-t-butyl ether
n-Butylbenzene
p-Isopropyltoluene
Styrene
Tetrachloroethene
trans-1,2-Dichloroethene
Trichloroethene
Vinyl acetate
Xylenes (Total)

Method: 8270C

Matrix Type: NPW/SCM

1,2,4-Trichlorobenzene
1,3-Dichlorobenzene
2,2-Oxybis (1-chloropropane)
2,4,6-Trichlorophenol
2,4-Dimethylphenol
2,4-Dinitrotoluene (2,4-DNT)
2-Chloronaphthalene
2-Methylnaphthalene
2-Nitroaniline
3,3'-Dichlorobenzidine
4,6-Dinitro-2-methylphenol
4-Chloro-3-methylphenol
4-Chlorophenyl phenyl ether
4-Nitroaniline
Acenaphthene

1,2-Dichlorobenzene
1,4-Dichlorobenzene
2,4,5-Trichlorophenol
2,4-Dichlorophenol
2,4-Dinitrophenol
2,6-Dinitrotoluene (2,6-DNT)
2-Chlorophenol
2-Methylphenol (o-Cresol)
2-Nitrophenol
3-Nitroaniline
4-Bromophenyl phenyl ether
4-Chloroaniline
4-Methylphenol (p-Cresol)
4-Nitrophenol
Acenaphthylene

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FOT Name: Solid and Chemical Materials, Organic

Method: 8270C

Matrix Type: NPW/SCM

Benzo(a)anthracene
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Bis(2-chloroethyl) ether
Butyl benzyl phthalate
Carbofuran (Furaden)
Chrysene
Dibenzofuran
Dimethyl phthalate
Di-n-octyl phthalate
Fluorene
Hexachlorobutadiene
Hexachloroethane
Isophorone
Nitrobenzene
N-Nitrosodi-n-propylamine
o-Cresol (2-Methylphenol)
Pentachlorophenol
Phenol

Anthracene
Benzo(a)pyrene
Benzo(g,h,i)perylene
Bis(2-chloroethoxy) methane
Bis(2-ethylhexyl) phthalate
Carbazole
Chlorobenzilate
Dibenz(a,h)anthracene
Diethyl phthalate
Di-n-butyl phthalate
Fluoranthene
Hexachlorobenzene
Hexachlorocyclopentadiene
Indeno(1,2,3-cd) pyrene
Naphthalene
N-Nitrosodimethylamine
N-Nitrosodiphenylamine
p-Cresol (4-Methylphenol)
Phenanthrene
Pyrene

Method: 8270C Mod_Farm Chemicals

Matrix Type: NPW/SCM

Acetochlor
Atrazine
Chlorpyrifos
EPTC
Metribuzin
Prometon
Terbufos

Alachlor
Butylate
Cyanazine
Metolachlor
Pendimethalin
Simazine
Trifluralin

Method: 8321B

Matrix Type: NPW/SCM

2,4,5-T
2,4-D
Aldicarb (Temik)

2,4,5-TP (Silvex)
2,4-DB
Carbofuran (Furaden)

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FOT Name: Solid and Chemical Materials, Organic

Method: 8321B

Matrix Type: NPW/SCM

Dalapon

Dicamba

Dinoseb

MCPA

MCPP

Oxamyl



**LEAD RISK
ASSESSOR LICENSE**

LEAD ID	ISSUED	EXPIRES
010116	1/19/2017	1/31/2018

Steven M Honn
5255 Buford St
Springfield, IL 62703



ILLINOIS LEAD PROGRAM
Environmental Health

Alteration of this license shall result in legal action
RISK ASSESSOR CERTIFICATE EXPIRES
12/19/2017

This license issued under authority of the State
of Illinois -Department of Public Health

This license is valid only when accompanied by
a valid training course certificate

If found return to 525 W. Jefferson St Springfield, IL 62761

2014



Occupational Training & Supply, Inc.

7233 S. Adams Street ♦ Willowbrook, IL 60527 ♦ (630) 655-3900

Lead Risk Assessor Refresher

Occupational Training & Supply, Inc. certifies that

Steven Honn

has successfully completed the Lead Risk Assessor Refresher course and has passed the competency exam with a minimum score of 70%.
This course is accredited by the Illinois Department of Public Health in accordance with the Illinois Lead Poisoning Prevention Code.

Course Date: 12/19/2014

Exam Date: 12/19/2014

Expiration Date: 12/19/2017

Certificate Number: LRAR1412193211


Kathy DeSalvo, Director



Mitigation Strategies

**for Lead Found in
School Drinking Water**



Guidance Document for Mitigating Lead in Schools





Pursuant to the Illinois Plumbing Licensing Law (225 ICLS 320/35.5), the Illinois Department of Public Health (IDPH) is required to provide guidance to schools concerning mitigation of hazards discovered by testing for lead in water.

While Section 35.5 does not specifically require mitigation, IDPH is requiring the mitigation strategies and requirements contained in this guidance document to be followed for all plumbing fixtures identified with any level of lead. Mitigation should continue until subsequent testing indicates no lead is present in water.

Mitigation strategies depend on many variables and schools may need to implement various and multiple steps to mitigate lead-in-water hazards. This guidance provides the most common mitigations strategies, but is not intended to be all inclusive.

WQMP

Water Quality Management Plan

Steps to an Effective Water Quality Management Plan

Regardless of lead or any other potential plumbing issues within your facility, developing an effective Water Quality Management Plan (WQMP) is essential to ensuring that safe, potable drinking water is maintained at all times.

In many cases, the internal plumbing system in schools and other large facilities is extensive, often containing hundreds, if not thousands of feet of pipe. If left unused for extended periods of time (2-3 days), the water in this pipe can become stagnant and develop internal water quality issues such as high lead concentrations and harmful bacterial growth.

An effective WQMP can help mitigate the potential for these negative water quality issues.

The steps outlined in this section are not intended to be all inclusive, since every facility and administration is different, each with their own set of individual circumstances. However, it should help you understand the general concepts of a WQMP and how you can develop your unique team to address potential water quality conditions within your facility.

Step 1

Select Your Team

Your team could include:

- Administrators and Faculty
- Facilities and Maintenance Staff
- Parents
- Students
- Water Suppliers

These individuals will be key to implementing whatever program you develop.

Step 2

Understand Your Facility Layout

- Obtain building plans.
- Know where your drinking fountains and food service water fixtures are located.

- In general terms, familiarize yourself with the layout of your plumbing system. Look for long pipe runs with fixtures that may be used infrequently, even when the building is occupied.



Step 3

Understand Your Facility Schedule

Although this step will be intuitive for facility staff, you should familiarize your team with the schedule of the facility. Questions to ask include:

- When is the facility closed for more than just one day?
 - Weekends, holidays, extended spring or summer break periods.

- Are there any particular areas of the building that are unused even when the rest of the facility is operational? These may include:
 - Gymnasiums
 - Churches or rectories
 - Childcare areas
 - Particular classroom areas or wings of the building.

Step 4

Develop Your Plan

The principal goal of your plan will be to flush an adequate amount of water through your plumbing system in order to maintain fresh (safe) drinking water at all times, in all areas of your facility. In addition, you want to do this without unnecessarily wasting water.

Flushing is the easiest method whereby fresh water may be delivered from the water main. Because lead concentrations increase the longer the water is in contact with pipes or plumbing fixtures containing lead, reducing the water age (how long water sits in the pipe) will reduce the levels of lead in water.

Note: IDPH suggests the following program guidelines be considered as minimum steps:

1. *Locate the fixtures farthest from the entry point of the water service to the building and flush them for 10 minutes each morning.*
2. *Open all fixtures used for cooking and drinking and run until you feel the water temperature get colder.*

Additional information on flushing and other remedies is available in the U.S. Environmental Protection Agency's [3Ts for Reducing Lead in Drinking Water In Schools Technical Guidance](#).

Schools can request help from their supplier in identifying potential lead hazards and developing mitigation strategies. The water supplier can also educate the school on topics like corrosion control and water age.

Schools on well water or non-community water systems, can request help from the Illinois Section American Water Works Association (AWWA) or the Illinois Rural Water Association.

Your plan may likely include some if not all of these actions:

Mechanical Flushing requires the installation of devices such as valves or other similar equipment on the ends of long pipes that can be set to automatically flush at pre-determined intervals.

Licensed plumbers and engineers can help determine the type of device that should be installed and where to install the device.

Manual Flushing will likely require a variety of individuals to implement.

Faculty - Faculty members may be able to flush fixtures (sinks, drinking fountains, etc.) if they are nearby or in their classroom or work area.

Parents - Parent volunteers may be helpful in flushing fixtures in general areas or in organizing student volunteers to help with that job.

Students - Faculty and school administrators often are interested in providing students with additional responsibilities outside the classroom. Utilizing students to assist in the implementation of your WQMP can help teach them responsibility and better understand the importance of safe drinking water.

- **Develop a Student Water Patrol**

Select a handful of students whom you believe are deserving of responsibility.

If you have a public water utility, engage those professionals to explain the importance of safe drinking water and how the students can help protect their classmates by participating in a Student Water Patrol.

Step 5 Implement Your Plan

Remove the problem fixture(s) from service

Immediately upon learning that a fixture has tested positive for lead, it should be removed from service. *Install signs, remove handles or bag the device to prevent use until it can be addressed.*



Once the fixture has been addressed, validation testing is required and should be conducted in the same manner in which the initial testing was performed.

Persistent Problem Fixtures

- For sources of water that are not corrected by the steps outlined previously, infrastructure mitigation strategies may be required.
- Source investigation involves sequential sampling of the problem fixture to determine the relative location of the source of lead. Sequential sampling consists of a series of samples taken at defined time intervals from a single fixture.
- A plumbing survey, including a determination of installed plumbing materials, fixtures and length of pipes, should be developed to identify known and possible sources.
- Permanent removal of fixtures and branch plumbing should only be undertaken with the advice of a professional engineer or licensed plumber. Identified sources of lead, such as lead pipes, leaded plumbing fixtures and lead solder, should be replaced by a registered plumbing contractor with materials that do not contain lead.
- Automatic flushing valves, installed by a licensed plumber, may be implemented to ensure adequate flushing of piping systems.





Working Together ... Administration, Faculty, Students, Parents
and Water Professionals we can...

GET THE LEAD OUT !

- * Illinois Section AWWA email: jdillon@isawwa.org
- * Illinois Rural Water Association email: ilrwa@ilrwa.org

Questions regarding lead in schools should be directed to the:
Illinois Department of Public Health
Plumbing and Water Quality Program

Email: dph.leadh2o@illinois.gov