Lead Testing in Drinking Water

Site:
Rossville-Alvin Elementary School
350 N. Chicago Street
Rossville, IL 60963

Local Education Agency:
Rossville-Alvin C.U.S.D. 7

Completion Date:
November 8, 2017

IDEAL ENVIRONMENTAL ENGINEERING, INC.

Public Act 099-0922

Public Act 099-0922, was passed into law in January 2017. The Act requires the Local Education Agency (LEA) to test for lead in all water sources used for cooking and drinking in schools built on or before January 1, 2000, where more than 10 pre-kindergarten through 5th grade children are present. The timeframe for compliance is December 31, 2017, for buildings constructed prior to January 1, 1987; and December 31, 2018, for those built between January 2, 1987 and January 1, 2000. Water samples are required to be analyzed by a method approved by the Illinois Environmental Protection Agency (IEPA) that provides a minimum reporting limit of 2 parts per billion (ppb). Notifications are required. Mitigation may be required based on test results. A Water Quality Management Plan (WQMP) is required.

Scope of Service

On November 8, 2017, Ideal Environmental Engineering (IDEAL) performed water sampling at Rossville-Alvin Elementary School in Rossville, IL at the request of the LEA. The water source locations were provided to IDEAL by the LEA.

Purpose of Sampling

Rossville-Alvin Elementary School is a facility built prior to January 1, 2000, where pre-K through 5th grade students are present. The water was tested to identify possible lead contamination for compliance with Public Act 099-0922.

Sampling Methodology

Prior to sampling, in order to verify that the required 8-18 hour water stagnation period had been met, school personnel provided IDEAL's water collector with the date and time the plumbing system had last been used. The date and time provided are recorded on the chain of custody (COC).

For each water source identified by the LEA, a first-draw 250 milliliter (mL) sample of cold water was collected in a bottle provided by an IEPA-approved laboratory. A first-draw sample is the first amount of water collected from a source. After the first draw was collected, the source was flushed for 30 seconds, followed by the collection of a second-draw 250 mL sample of water. This second sample is called a flush sample. If multiple faucets use the same drain, only one second-draw (flush) sample may have been collected.

Each bottle was placed in a position that allowed for the collection of all of the water. Care was taken to prevent overflow. Each bottle was labeled with a unique identifier (sample ID). The sample ID was recorded on the COC, which lists the location of the sample, source of the sample, and the date and time the sample was collected.

The water bottles were delivered—with the COC to show the relinquishment and receipt of the samples—to an IEPA-accredited laboratory for analysis. The laboratory's accreditation was reviewed by IDEAL to ensure that it was current for an IEPA-approved method of analysis for lead in drinking water.

Summary of Sampling

20 water samples were collected from 10 sources. All results are shown in Table 1.1.

Table 1.1

Sample ID	Sample Location Description	Fixture Type	Sample Type	Concentration
01a	Kitchen - Prep - Northeast	KS - Kitchen Sink	First Draw	ND
01b	Kitchen - Prep - Northeast	KS - Kitchen Sink	Flush	ND
02a	Kitchen - Prep - Southeast	KS - Kitchen Sink	First Draw	3.08 ppb
02b	Kitchen - Prep - Southeast	KS - Kitchen Sink	Flush	ND
03a	Kitchen Prep - Sprayer	O - Other	First Draw	ND
03b	Kitchen Prep - Sprayer	O - Other	Flush	ND
04a	Kitchen Prep - Northwest	KS - Kitchen Sink	First Draw	2.84 ppb
04b	Kitchen Prep - Northwest	KS - Kitchen Sink	Flush	ND
05a	Kitchen Prep - Southwest	KS - Kitchen Sink	First Draw	2.78 ppb
05b	Kitchen Prep - Southwest	KS - Kitchen Sink	Flush	ND
06a	pre-K	S - Sink	First Draw	ND
06b	pre-K	S - Sink	Flush	ND
07a	Outside of Office	DF - Drinking Fountain	First Draw	ND
07b	Outside of Office	DF - Drinking Fountain	Flush	ND
08a	Outside of Men's Restroom	DF - Drinking Fountain	First Draw	ND
08b	Outside of Men's Restroom	DF - Drinking Fountain	Flush	ND
09a	Outside of Gym	DF - Drinking Fountain	First Draw	ND
09b	Outside of Gym	DF - Drinking Fountain	Flush	ND
10a	2nd Floor Corridor	DF - Drinking Fountain	First Draw	ND
10b	2nd Floor Corridor	DF - Drinking Fountain	Flush	ND
ND = None Detected				

Notifications

This building is subject to the Act. Notification as outlined below is not optional.

Notification Requirements:
The Illinois Department of Public Health (IDPH) must be informed of the results. The LEA is also required to provide notification of all water testing results to parents and legal guardians of all enrolled students. Notification can be done, at a minimum, on the school's website. In addition, when any test result exceeds 5 ppb, individual written or electronic notification is required to be sent to parents and legal guardians of all enrolled students and must include the location and source exceeding 5 ppb, and the USEPA website for information about lead in drinking water: www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water

Based on sample results, the following are notification requirements for this building:

- Submit to IDPH at dph.leadh2O@illinois.gov all sample results as shown in Table 1.1. As a courtesy, this step has been done by IDEAL. Please refer to Appendix A for electronic transmittal(s).

- Provide to parents and legal guardians all sample results as shown in Table 1.1. This can be done, at a minimum, on the school's website.

Mitigation

This building is subject to the Act. Mitigation is not optional.

> Mitigation Requirements:
>
> IDPH requires mitigation when lead is found in a sample above the minimum reporting limit (2 ppb). They recommend the sampling source be removed from service immediately upon learning that it has tested positive for lead. Re-testing is required after mitigation unless the sampling source is taken out of service. Mitigation is to continue until subsequent testing indicates lead levels are below the minimum reporting limit.

Based on sample results, the following are mitigation requirements for this building:

- Results shown in Table 1.3 were found to contain lead at or above the 2 ppb minimum reporting limit. Mitigate all sources identified in Table 1.3, and retest after mitigation is complete.

Refer to IDPH's website for mitigation strategies:
www.dph.illinois.gov/sites/default/files/publications/school-lead-mitigation-strategies-050917.pdf

Table 1.3 – Results over 2 ppb

Sample ID	Sample Location Description	Fixture Type	Sample Type	Concentration
02a	Kitchen - Prep - Southeast	KS - Kitchen Sink	First Draw	3.08 ppb
04a	Kitchen Prep - Northwest	KS - Kitchen Sink	First Draw	2.84 ppb
05a	Kitchen Prep - Southwest	KS - Kitchen Sink	First Draw	2.78 ppb

Water Quality Management Plan

For all schools subject to the Act, regardless of lead results, a Water Quality Management Plan (WQMP) must be developed and maintained.

The need for re-testing after mitigation may be affected by the WQMP.

Refer to IDPH's website for steps to an effective WQMP:
www.dph.illinois.gov/sites/default/files/publications/school-lead-mitigation-strategies-050917.pdf

General Comments

Refer to Appendix C for the complete analysis report, including chain of custody and laboratory accreditation.

This report is based strictly on Illinois Public Act 099-0922. You may also wish to refer to the EPA's *3 T's for Reducing Lead in Drinking Water* for additional guidance.

IDEAL sampled according to accepted protocol for this project (unless otherwise noted by limitations in the description of the scope of work) and based on our interpretation of the regulations affecting schools. IDEAL shall not be held liable if sources are re-sampled and found to contain lead.

Room numbers, room dimensions, occupant names, building years, etc. may not be accurate in this report if information provided to us, such as on a diagram, was not current.

This report shall not be reproduced, except in full, without the written consent of IDEAL. Record retention by IDEAL is not guaranteed. IDEAL reserves the right to provide copies of chains of custody rather than originals, as the originals will only be archived for a limited period of time.

The scope of work presented in this report was based on an understanding between IDEAL and the client, whether the understanding was from verbal conversation or written document(s). The scope of work and report shall be deemed accepted by the client unless the client advises to the contrary in writing within 10 days of the date this report is sent.

Please call our office at (800)535-0964 or (309)828-4259 if you have any questions, or if we can be of further assistance with your mitigation, water retesting, the WQMP, or with other environmental services such as asbestos, indoor air quality or bleacher inspections.

Thank you for giving us the opportunity to provide this service to you. We sincerely appreciate the trust and confidence you have in our services.

APPENDIX A

Paul Weber

From: Paul Weber
Sent: Thursday, December 21, 2017 11:46 AM
To: 'dph.leadh2O@illinois.gov'
Subject: Lead in Water Results - Rossville-Alvin CUSD 7
Attachments: J#21355 Rossville-Alvin Elem Lab Analysis.pdf; J#21355 Rossville-Alvin IDPH Data Report.xlsx; Prairie Analyitical Accredidation.pdf

On behalf of Rossville-Alvin C.U.S.D. 7, lead-in-water laboratory results and laboratory accreditation are attached for the following school(s):

Rossville-Alvin Elementary School

If you have any questions or need additional information, please do not hesitate to call our office at (800)535-0964.

Paul Weber
Ideal Environmental Engineering, Inc.
2904 Tractor Lane
Bloomington, IL 61704
Ph: 309-828-4259 or 800-535-0964
Fax: 309-828-5735
Email: pweber@idealenvironmental.com

ATTACHMENT A

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Prairie Analytical Systems, INCORPORATED

Monday, December 11, 2017

Central Office Staff
Ideal Environmental Engineering, Inc.
2904 Tractor Lane
Bloomington, IL 61704
TEL: (309) 828-4259
FAX: (309) 828-5735

RE: Rossville-Alvin Elem School PAS WO: 17K0522

Prairie Analytical Systems, Inc. received 20 sample(s) on 11/17/2017 for the analyses presented in the following report.

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

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

Respectfully submitted,

Christina E. Pierce
Project Manager

Certifications: NELAP/NELAC - IL #100323

Prairie Analytical Systems, Inc. **Date:** 12/11/2017

LABORATORY RESULTS

Client: Ideal Environmental Engineering, Inc.
Project: Rossville-Alvin Elem School **Lab Order:** 17K0522

Client Sample ID: 01a **Lab ID:** 17K0522-01
Collection Date: 11/8/17 5:45 **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	12/4/17 9:05	12/4/17 14:26	EPA200.8 R5.	LAH

Client Sample ID: 01b **Lab ID:** 17K0522-02
Collection Date: 11/8/17 5:45 **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	12/4/17 9:05	12/4/17 14:29	EPA200.8 R5.	LAH

Client Sample ID: 02a **Lab ID:** 17K0522-03
Collection Date: 11/8/17 5:47 **Matrix:** Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
***Lead**	**3.08**	2.00		µg/L	1	12/4/17 9:05	12/4/17 14:31	EPA200.8 R5.	LAH

Client Sample ID: 02b **Lab ID:** 17K0522-04
Collection Date: 11/8/17 5:47 **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	12/4/17 9:05	12/4/17 14:33	EPA200.8 R5.	LAH

Client Sample ID: 03a **Lab ID:** 17K0522-05
Collection Date: 11/8/17 5:49 **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	12/4/17 9:05	12/4/17 14:35	EPA200.8 R5.	LAH

Client Sample ID: 03b **Lab ID:** 17K0522-06
Collection Date: 11/8/17 5:49 **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	12/4/17 9:05	12/4/17 14:37	EPA200.8 R5.	LAH

Prairie Analytical Systems, Inc. **Date:** 12/11/2017

LABORATORY RESULTS

Client: Ideal Environmental Engineering, Inc.
Project: Rossville-Alvin Elem School **Lab Order:** 17K0522
Client Sample ID: 04a **Lab ID:** 17K0522-07
Collection Date: 11/8/17 5:52 **Matrix:** Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
***Lead**	**2.84**	2.00		µg/L	1	12/4/17 9:05	12/4/17 14:40	EPA200.8 R5.	LAH

Client Sample ID: 04b **Lab ID:** 17K0522-08
Collection Date: 11/8/17 5:52 **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	12/4/17 9:05	12/4/17 14:42	EPA200.8 R5.	LAH

Client Sample ID: 05a **Lab ID:** 17K0522-09
Collection Date: 11/8/17 5:56 **Matrix:** Drinking Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Metals by ICP-MS									
***Lead**	**2.78**	2.00		µg/L	1	12/4/17 9:07	12/4/17 14:55	EPA200.8 R5.	LAH

Client Sample ID: 05b **Lab ID:** 17K0522-10
Collection Date: 11/8/17 5:56 **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	12/4/17 9:07	12/4/17 15:02	EPA200.8 R5.	LAH

Client Sample ID: 06a **Lab ID:** 17K0522-11
Collection Date: 11/8/17 5:59 **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	12/4/17 9:07	12/4/17 15:04	EPA200.8 R5.	LAH

Client Sample ID: 06b **Lab ID:** 17K0522-12
Collection Date: 11/8/17 5:59 **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	12/4/17 9:07	12/4/17 15:06	EPA200.8 R5.	LAH

Prairie Analytical Systems, Inc. **Date:** 12/11/2017

LABORATORY RESULTS

Client: Ideal Environmental Engineering, Inc.
Project: Rossville-Alvin Elem School **Lab Order:** 17K0522

Client Sample ID: 07a **Lab ID:** 17K0522-13
Collection Date: 11/8/17 6:06 **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	12/4/17 9:07	12/4/17 15:08	EPA200.8 R5.	LAH

Client Sample ID: 07b **Lab ID:** 17K0522-14
Collection Date: 11/8/17 6:06 **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	12/4/17 9:07	12/4/17 15:10	EPA200.8 R5.	LAH

Client Sample ID: 08a **Lab ID:** 17K0522-15
Collection Date: 11/8/17 6:09 **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	12/4/17 9:07	12/4/17 15:21	EPA200.8 R5.	LAH

Client Sample ID: 08b **Lab ID:** 17K0522-16
Collection Date: 11/8/17 6:09 **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	12/4/17 9:07	12/4/17 15:24	EPA200.8 R5.	LAH

Client Sample ID: 09a **Lab ID:** 17K0522-17
Collection Date: 11/8/17 6:13 **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	12/4/17 9:07	12/4/17 15:26	EPA200.8 R5.	LAH

Client Sample ID: 09b **Lab ID:** 17K0522-18
Collection Date: 11/8/17 6:13 **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	12/4/17 9:07	12/4/17 15:28	EPA200.8 R5.	LAH

Prairie Analytical Systems, Inc. **Date:** 12/11/2017

LABORATORY RESULTS

Client: Ideal Environmental Engineering, Inc.
Project: Rossville-Alvin Elem School **Lab Order:** 17K0522
Client Sample ID: 10a **Lab ID:** 17K0522-19
Collection Date: 11/8/17 6:16 **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	12/4/17 9:07	12/4/17 15:30	EPA200.8 R5.	LAH

Client Sample ID: 10b **Lab ID:** 17K0522-20
Collection Date: 11/8/17 6:16 **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	12/4/17 9:07	12/4/17 15:37	EPA200.8 R5.	LAH

Prairie Analytical Systems, Inc. **Date:** 12/11/2017

LABORATORY RESULTS

Client: Ideal Environmental Engineering, Inc.
Project: Rossville-Alvin Elem School **Lab Order:** 17K0522

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
Chicago IL Office - 9114 Virginia Rd., Ste 112 - Lake in the Hills, IL 60156 - Phone (847) 651-2604 - Facsimile (847) 458-9660
Central / Southern IL Contact - Phone (217) 414-7762 - Facsimile (217) 753-1152

Prairie Analytical Systems, INCORPORATED
www.prairieanalytical.com

Client / Address	Ideal Environmental Engineering, Inc. / 2904 Tractor Lane
City, State, Zip Code	Bloomington, IL 61704
Phone / Facsimile	309-828-4259 / 309-828-5735
P.O. (J#) / LEA	J#21355 / Rossville-Alvin C.U.S.D. 7
Building Description	Rossville-Alvin Elem. School
Address	350 N. Chicago Street, Rossville, IL 60963
ISBE ID	54-092-0070-26-2001
Contact/E-Mail Address	Central Office Staff / leadinwater@idealenvironmental.com

Sample ID	Sample Location Description	Sample Date	Sample Time	Sample Location Details: Fixture Type (DF=Drinking Fountain, S=Sink, WF=Water Cooler, KS=Kitchen Sink, BF=Bottle Filler, O=Other)	When Side by Side Fountains, etc. exist, indicate: Left (L), Right (R), Upper (UP) Lower (LO) as applicable.	Source Type: (Single Source/Single Drain=SS; Double Source/Single Drain=DS; Double Source/Double Drain=DD)	250 ml Collected?	First Draw Sample = 1 Second Draw (30-Second Flush) = 2		Miscellaneous: Make / Model
01a	Kitchen Prep NE	11/8/17	5:45a	KS	NE	SS	Y	1		Chicago
01b	" NE	"	"		NE			2		
02a	Kitchen Prep SE		5:47a		SE			1		
02b	" SE		"		SE			2		"
03a	Kitchen Prep Sprayer		5:49a		E			1		Unknown
03b	" Sprayer		"		E			2		"
04a	Kitchen Prep NW		5:52a		NW			1		Chicago
04b	" NW		"		NW			2		
05a	Kitche Prep SW		5:56a		SW			1		
05b	" SW		"		SW			2		"
06a	Pre K Sink		5:59a	S				1		DeHg
06b	"		"	S				2		"

Miscellaneous: # of sources / # of samples: 10/20; Date Water Last Used: 11/7/17; Time Water Last Used: 7:30pm

Matrix: Drinking Water | Preservative: None | Analysis/Method Requested: Lead

Relinquished By	Date	Time	Received By	Date		Method of Shipment
Collected By:	11/8/17	1:00pm	IDEAL Lead in Water Dept., CO-PAS	11/14		
IDEAL Lead in Water Dept., CO-PAS	11/7/17	11:40		11/7/17		Hand
				11-17-17	3pm	Hand

Special Instructions:

Turnaround Time: Standard ☑ Rush ☐

☐No

Temperature (°C): 16.0

Copies: White - Client / Yellow - PAS, Inc. / Pink - Sampler
PAS COC - IDEAL

Revision 4
March 3, 2017

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APPENDIX C

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 Contact - Phone (217) 414-7762 - Facsimile (217) 753-1152

Prairie Analytical Systems, INCORPORATED
www.prairieanalytical.com

Client / Address	Ideal Environmental Engineering, Inc. / 2904 Tractor Lane
City, State, Zip Code	Bloomington, IL 61704
Phone / Facsimile	309-828-4259 / 309-828-5735
P.O. (J#) / LEA	J#21355 / Rossville-Alvin C.U.S.D. 7
Building Description	Rossville-Alvin Elem. School
Address	350 N. Chicago Street, Rossville, IL 60963
ISBE ID	54-092-0070-26-2001
Contact/E-Mail Address	Central Office Staff / leadinwater@idealenvironmental.com

Miscellaneous: # of sources / # of samples: 10/20; Date Water Last Used: 11/7/17; Time Water Last Used: 7:30pm

Sample ID	Sample Location Description	Sample Date	Sample Time	Sample Location Details:	Fixture Type (DF=Drinking Fountain, S=Sink, WF=Water Cooler, KS=Kitchen Sink, BF=Bottle Filler, O=Other)	When Side by Side Fountains, etc. exist, indicate: Left (L), Right (R), Upper (UP) Lower (LO) as applicable.	Source Type: (Single Source/Single Drain=SS, Double Source/Single Drain=DS; Double Source/Double Drain=DD)	250 ml Collected?	First Draw Sample = 1 Second Draw (30-Second Flush) = 2		Make / Model
07a	Outside Office	11/8/17	6:06a		DF		SS	Y	1		Elkay
07b	⊥	⊥	⊥		⊥		⊥	⊥	2		⊥
08a	Outside Mens RR		6:09a		DF				1		
08b	⊥		⊥		⊥				2		
09a	Outside Gym		6:13a		DF		↓		1		
09b	⊥		⊥		⊥				2		
10a	2nd Fl corr		6:16a		DF		SS		1		
10b	⊥	⊥	⊥		⊥		↓	↓	2		⊥

Matrix: Drinking Water | **Preservative:** None | **Analysis/Method Requested:** Lead

	Relinquished By	Date	Time	Received By	Date		Method of Shipment
Collected By:		11/3/17	1:00pm	IDEAL Lead in Water Dept.,			
IDEAL Lead in Water Dept.,					11-17-17		

Special Instructions:

Turnaround Time: Standard ☑ Rush ☐ | ☐No | Temperature (°C): 16.0

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Copies: White - Client / Yellow - PAS, Inc. / Pink - Sampler
COC - IDEAL

Revision 4
March 3, 2017

APPENDIX C

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

Celeste M. Crowley
Acting Manager
Environmental Laboratory Accreditation Program

John D. South

John South
Accreditation Officer
Environmental Laboratory Accreditation Program

Certificate No.: 004184
Expiration Date: 01/31/2018
Issued On: 06/20/2017

State of Illinois
Environmental Protection Agency

Certificate No.: 004184

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.

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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

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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

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FOT Name: Drinking Water, Organic

Matrix Type: Potable Water

Method: USEPA524.2R4.1

- 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)

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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)

Method: SM4500S2-F,2000

Matrix Type: NPW/SCM

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FOT Name: Non Potable Water, Inorganic

Matrix Type: NPW/SCM

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

Method: SM4500S2-F,2000

Sulfide

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FOT Name: Non Potable Water, Inorganic

Matrix Type: NPW/SCM

Vanadium

Method: USEPA200.8,1994

Matrix Type: NPW/SCM

Aluminum
Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Manganese
Nickel
Selenium
Sodium
Tin
Vanadium

Method: USEPA245.2,1974

Matrix Type: NPW/SCM

Mercury

Method: USEPA300.0R2.1,1993

Matrix Type: NPW

Bromide
Fluoride
Nitrate-Nitrite (as N)
Orthophosphate (as P)

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

Method: USEPA200.7,1994

Titanium
Zinc

Antimony
Barium
Boron
Calcium
Cobalt
Iron
Magnesium
Molybdenum
Potassium
Silver
Thallium
Titanium
Zinc

Chloride
Nitrate
Nitrite
Sulfate

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FOT Name: Non Potable Water, Inorganic

Matrix Type: NPW

Method: USEPA365.1R2.0,1993

Matrix Type: NPW

Orthophosphate (as P)

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

Method: USEPA350.1R2.0,1993

Ammonia

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

Matrix Type: NPW/SCM

Method: 6010B

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-BHC
- alpha-Chlordane
- beta-BHC
- Chlordane - not otherwise specified
- delta-BHC
- Dieldrin
- Endosulfan I
- Endosulfan II
- Endosulfan sulfate
- Endrin
- Endrin aldehyde
- Endrin ketone
- gamma-BHC (Lindane)
- gamma-Chlordane
- Heptachlor
- Heptachlor epoxide
- Methoxychlor
- Toxaphene

Method: 8082

Matrix Type: NPW/SCM

- PCB-1016
- PCB-1221
- PCB-1232
- PCB-1242
- PCB-1248
- PCB-1254
- PCB-1260

Method: 8260B

Matrix Type: NPW/SCM

- 1,1,1,2-Tetrachloroethane
- 1,1,1-Trichloroethane
- 1,1,2,2-Tetrachloroethane
- 1,1,2-Trichloroethane
- 1,1-Dichloroethane
- 1,1-Dichloroethene
- 1,1-Dichloropropene
- 1,2,3-Trichlorobenzene
- 1,2,3-Trichloropropane
- 1,2,4-Trichlorobenzene
- 1,2,4-Trimethylbenzene
- 1,2-Dibromo-3-chloropropane (DBCP)
- 1,2-Dibromoethane (EDB)
- 1,2-Dichlorobenzene
- 1,2-Dichloroethane
- 1,2-Dichloropropane
- 1,3,5-Trimethylbenzene
- 1,3-Dichlorobenzene
- 1,3-Dichloropropane
- 1,4-Dichlorobenzene
- 2,2-Dichloropropane
- 2-Butanone (Methyl ethyl ketone, MEK)
- 2-Chloroethyl vinyl ether
- 2-Chlorotoluene
- 2-Hexanone
- 4-Chlorotoluene
- 4-Methyl-2-pentanone (Methyl isobutyl ketone, MIBł
- Acetone
- Acetonitrile
- Acrolein (Propenal)
- Acrylonitrile
- Benzene

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FOT Name: Solid and Chemical Materials, Organic

Matrix Type: NPW/SCM

Method: 8260B

Bromochloromethane	Bromobenzene
Bromoform	Bromodichloromethane
Carbon disulfide	Bromomethane
Chlorobenzene	Carbon tetrachloride
Chloroethane	Chlorodibromomethane (Dibromochloromethane)
Chloromethane	Chloroform
cis-1,3-Dichloropropene	cis-1,2-Dichloroethene
Dichloromethane (Methylene chloride)	Dichlorodifluoromethane
Isopropylbenzene	Ethylbenzene
Naphthalene	Methyl-t-butyl ether
n-Propylbenzene	n-Butylbenzene
sec-Butylbenzene	p-Isopropyltoluene
tert-Butylbenzene	Styrene
Toluene	Tetrachloroethene
trans-1,3-Dichloropropene	trans-1,2-Dichloroethene
Trichlorofluoromethane	Trichloroethene
Vinyl chloride	Vinyl acetate
	Xylenes (Total)

Method: 8270C

Matrix Type: NPW/SCM

1,2,4-Trichlorobenzene	1,2-Dichlorobenzene
1,3-Dichlorobenzene	1,4-Dichlorobenzene
2,2-Oxybis (1-chloropropane)	2,4,5-Trichlorophenol
2,4,6-Trichlorophenol	2,4-Dichlorophenol
2,4-Dimethylphenol	2,4-Dinitrophenol
2,4-Dinitrotoluene (2,4-DNT)	2,6-Dinitrotoluene (2,6-DNT)
2-Chloronaphthalene	2-Chlorophenol
2-Methylnaphthalene	2-Methylphenol (o-Cresol)
2-Nitroaniline	2-Nitrophenol
3,3'-Dichlorobenzidine	3-Nitroaniline
4,6-Dinitro-2-methylphenol	4-Bromophenyl phenyl ether
4-Chloro-3-methylphenol	4-Chloroaniline
4-Chlorophenyl phenyl ether	4-Methylphenol (p-Cresol)
4-Nitroaniline	4-Nitrophenol
Acenaphthene	Acenaphthylene

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FOT Name: Solid and Chemical Materials, Organic

Matrix Type: NPW/SCM

Benzo(a)anthracene	Benzo(a)pyrene
Benzo(b)fluoranthene	Benzo(g,h,i)perlyene
Benzo(k)fluoranthene	Bis(2-chloroethoxy) methane
Bis(2-chloroethyl) ether	Bis(2-ethylhexyl) phthalate
Butyl benzyl phthalate	Carbazole
Carbofuran (Furaden)	Chlorobenzilate
Chrysene	Dibenz(a,h)anthracene
Dibenzofuran	Diethyl phthalate
Dimethyl phthalate	Di-n-butyl phthalate
Di-n-octyl phthalate	Fluoranthene
Fluorene	Hexachlorobenzene
Hexachlorobutadiene	Hexachlorocyclopentadiene
Hexachloroethane	Indeno(1,2,3-cd) pyrene
Isophorone	Naphthalene
Nitrobenzene	N-Nitrosodimethylamine
N-Nitrosodi-n-propylamine	N-Nitrosodiphenylamine
o-Cresol (2-Methylphenol)	p-Cresol (4-Methylphenol)
Pentachlorophenol	Phenanthrene
Phenol	Pyrene

Method: 8270C

Anthracene

Method: 8270C Mod_Farm Chemicals

Matrix Type: NPW/SCM

Acetochlor	Alachlor
Atrazine	Butylate
Chlorpyrifos	Cyanazine
EPTC	Metolachlor
Metribuzin	Pendimethalin
Prometon	Simazine
Terbufos	Trifluralin

Method: 8321B

Matrix Type: NPW/SCM

2,4,5-T	2,4,5-TP (Silvex)
2,4-D	2,4-DB
Aldicarb (Temik)	Carbofuran (Furaden)

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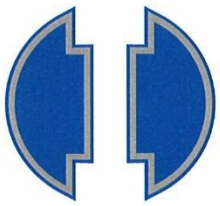
FOT Name: Solid and Chemical Materials, Organic

Method: 8321B

Matrix Type: NPW/SCM

Dicamba	Dalapon
MCPA	Dinoseb
Oxamyl	MCPP



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