Cedar corporation

604 Wilson Avenue
Menomonie, WI 54751

engineers | architects | planners | environmental specialists
land surveyors | landscape architects | interior designers

800-472-7372
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December 18, 2017

Mr. Pat Collins
WDNR - Baldwin Service Center
890 Spruce Street
Baldwin, WI 54002

SUBJECT: Lee Farm Lead Sampling, BRRTS #02-56-000243

Dear Mr. Collins:

Enclosed are the results for the Lee Farm groundwater monitoring wells and residential wells which were sampled on November 28th and December 8th of 2017.

MW-6 was not sampled due to failure of the casing. Please note that none of the monitoring wells reported lead concentrations above the enforcement standard of 15 ppb and only one well above the preventive action limit (PAL) of 1.5 ppb for total lead which was MW-5 at 12 ppb. The Mast (FKA Hillstead) residence was reported above the PAL at 1.6 ppb. The enclosed tables present all the recent sampling results as well as historical data for the depths to water (Table 1) and groundwater analytical data (Table 2).

During this sampling round all residential wells were sampled except for the old Lee Farm as it remains vacant.

We have forwarded the analytical results to the Ihrkes, Petersons, Mast (FKA Hillstead), Burgesons, Witters, and Petraitis (FKA Xiong).

If you have any questions, please do not hesitate to contact me.

Sincerely,

CEDAR CORPORATION

Kirsten Lee

Kirsten Lee
Environmental Specialist

TABLE 1

WDNR - Lee Farms Depth to Water
Woodville, WI

1999 to 2017

Date	MW - 1 (TD - 133.50)	MW - 3 (TD - 123.52)	MW - 4 (TD - 120.01)	MW - 5 (TD - 128.62)	MW - 6 (TD - 135.4)
11/17/98	98.80	103.92	92.07	116.15	126.02
12/2/99	102.30	106.90	95.31	118.90	127.32
11/7/00	103.60	108.71	96.89	121.02	128.32
10/10/01	98.55	103.69	91.60	115.89	121.87*
11/14/02	98.21	103.37	91.24	115.53	125.13
10/21/03	99.70	104.79	93.08	116.79	124.34
11/9/04	101.86	107.00	95.09	119.35	127.85
10/7/05	104.01	109.13	97.87	121.39	129.95
10/9/06	103.37	110.54	98.58	122.74	131.82
10/30/07	105.75	111.11	98.83	123.32	133.45
10/31/08	105.00	110.18	98.13	122.28	131.99
11/3/09	108.28	113.43	101.50	125.66	135.59
11/1/10	104.99	110.35	97.83	122.27	132.87
11/29/11	103.14	108.23	96.30	120.41	130.57
10/16/12	105.86	110.98	99.19	123.33	133.20
10/28/13	104.67	109.79	97.75	121.85	132.08
10/24/14	99.75	104.91	92.68	116.99	127.46
7/23/15	102.04	107.25	95.03	119.31	129.60
11/4/16	97.45	102.62	90.42	114.71	124.89
11/28/17	96.62	101.68	89.95	113.93	123.82

TD = Total Depth

*Bentonite was first noticed in well

TABLE 2

WDNR - Lee Farms Lead Sampling

Woodville, WI

1999 to 2017

	Witter	Lee Farms	Mast (Former Hillstead)	Burgeson (Former Ashes)	Peterson	Petraitis (Former Xiong)	Ihrke	MW - 1		MW - 3		MW - 4		MW - 5		MW - 6	
Sample Date	Total Lead	Total Lead	Total Lead	Total Lead	Total Lead	Total Lead	Total Lead	Total Lead	Dissolved Lead	Total Lead	Dissolved Lead	Total Lead	Dissolved Lead	Total Lead	Dissolved Lead	Total Lead	Dissolved Lead
11/17/98	*3.1*	*3.0*	<0.89	*1.7*			<0.89										
12/2/99	*1.9*		<1.2	<1.2				*7.4*	<1.2	*4.7*	<1.2	*4.6*	<1.2	**19**	<1.2	*1.5*	<1.2
12/2/99	*1.9*		<1.2	<1.2													
11/2/00	<1.2	<1.2		<1.2			1.3										
11/7/00			<1.2					*3.9*	*1.6*	<1.2	1.3	<1.2	*1.7*	<1.2	*1.5*	*2.8*	*2.8*
10/10/01	*1.5*	<1.2	<1.2	<1.2	*2.9*		<1.2	*2.1*	<1.6	*3.8*	1.3	*6.0*	<1.2	**38**	*8.9*	**93.0**	<1.2
11/14/02	*2.5*	<1.2	<1.2	1.2	*2.6*		**22.0**	*2.0*		*2.0*		<1.2		**22**		<1.2	
12/11/02							<1.2										
10/21/03	*3.3*		<1.4	**20**	*2.7*		<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	**77**	<1.4	**760**	<1.4
2/2/04		<1.4		<1.4													
11/9/04	*1.9*	*3.6*	<1.4					<1.4	<1.4	<1.4	<1.4	*2.3*	<1.4	**37**	<1.4	**320**	<1.4
4/13/05					*4.7*												
10/7/05	**27.0**	0.1		*1.7*	*2.5*		*3.8*	*1.9*	1.4	*2.5*	<1.4	*2.2*	<1.4	**38**	<1.4	**600**	
11/9/05	1.1	<0.44	0.5														
10/9/06	*1.8*	<0.44	<0.44	<0.44	*1.7*		<0.44	0.7	<1.4	*2.6*	*1.8*	1.3	<1.4	**48**	*11.0*	**1500**	**1300**
10/30/07	*3.4*	0.8	*5.2*	1.0	*2.3*	*4.8*	1.3	*2.7*	<1.4	*2.6*	<1.4	1.0	<1.4	**72**	<1.4	**2900**	<1.4
10/31/08	*2.3*	<0.12	NS	0.7	0.9	0.6	0.6	*3.0*	<0.12	*3.9*	<0.12	0.9	<0.12	**25**	<0.12	**120**	0.30
11/3/09	*2.3*		<0.61	<0.61	1.1	<0.61	<0.61	0.88	**19.0**	*2.1*	1.4	*2.6*	*3.0*	**76**	*9.2*	**4900**	
11/1/10	0.99	<0.61	0.77	<0.61	1.3	NS	*1.7*	0.7	<0.61	0.86	<0.61	*3.2*	<0.61	**27**	<0.61	**520**	
11/29/11	*2.7*	0.13	0.26	0.56	0.87	NS	0.55	<0.13	*2.4*	0.98	<0.13	*1.7*	<0.13	**15**	<0.13	**50**	0.14
10/16/12	1.0	NS	0.38	*2.2*	1.4	NS	*1.3*	*1.7*	<0.16	0.25	<0.16	0.21	<0.16	0.82	<0.16	0.46	<0.16
10/28/13	1.0	NS	*3*	0.56	0.18	NS	0.24	*2.7*	<0.15	*2.6*	<0.15	*1.9*	<0.15	*14*	<0.15	**24**	<0.15
10/24/14	*2.9*	NS	*2*	*1.7*	1.2	NS	0.86	*2.8*	<0.091	1.3	<0.091	*2.3*	<0.091	*9*	<0.091	**28.2**	<0.091
7/23/15	*1.8*	NS	0.24	*2.3*	1.1	NS	0.74	0.41	<0.14	*1.7*	<0.14	1.1	<0.14	*9.5*	<0.14	0.91	<0.14
11/4/16	**42.0**	NS	<2.5	<2.5	<2.5	NS	NS	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	*7.2*	<2.5	NS	NS
11/18/16	1.1	NS					0.25										
11/28/17	0.6	NS	*1.6*	<0.19	0.73	0.24		0.87	<0.19	0.86	<0.19	0.5	<0.19	*12*	<0.19	NS	NS
12/8/17							0.36										

All measurements in µg/L.
µg/L = *micrograms per liter = ppb = parts per billion*
NS = Not Sampled

ES = NR 140 Enforcement Standard of 15 ppb.
PAL = NR140 Preventive Action Limit of 1.5 ppb.

All **bold** results exceed the ES.
All *italic* results exceed the PAL.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-137894-1
Client Project/Site: WDNR Lee Farm - 2481

For:
Cedar Corporation
604 Wilson Avenue
Menomonie, Wisconsin 54751

Attn: Mitch Evenson

Sandie Fredrick

Authorized for release by:
12/4/2017 12:53:21 PM

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Job ID: 500-137894-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-137894-1

Comments
No additional comments.

Receipt
The samples were received on 11/30/2017 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6° C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Field Service / Mobile Lab
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-137894-1

Client Sample ID: MW-4 — Lab Sample ID: 500-137894-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.50		0.50	0.19	ug/L	1		6020A	Total Recoverable

Client Sample ID: MW-5 — Lab Sample ID: 500-137894-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	12.0		0.50	0.19	ug/L	1		6020A	Total Recoverable

Client Sample ID: MW-3 — Lab Sample ID: 500-137894-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.86		0.50	0.19	ug/L	1		6020A	Total Recoverable

Client Sample ID: MW-1 — Lab Sample ID: 500-137894-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.87		0.50	0.19	ug/L	1		6020A	Total Recoverable

Client Sample ID: Peterson — Lab Sample ID: 500-137894-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.73		0.50	0.19	ug/L	1		6020A	Total Recoverable

Client Sample ID: Burgeson — Lab Sample ID: 500-137894-6

No Detections.

Client Sample ID: Witter — Lab Sample ID: 500-137894-7

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.64		0.50	0.19	ug/L	1		6020A	Total Recoverable

Client Sample ID: Petraitis — Lab Sample ID: 500-137894-8

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.24	J	0.50	0.19	ug/L	1		6020A	Total Recoverable

Client Sample ID: Mast — Lab Sample ID: 500-137894-9

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	1.6		0.50	0.19	ug/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-137894-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL CHI

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-137894-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-137894-1	MW-4	Water	11/28/17 11:50	11/30/17 09:10
500-137894-2	MW-5	Water	11/28/17 12:50	11/30/17 09:10
500-137894-3	MW-3	Water	11/28/17 13:15	11/30/17 09:10
500-137894-4	MW-1	Water	11/28/17 13:35	11/30/17 09:10
500-137894-5	Peterson	Water	11/28/17 11:00	11/30/17 09:10
500-137894-6	Burgeson	Water	11/28/17 11:05	11/30/17 09:10
500-137894-7	Witter	Water	11/28/17 11:35	11/30/17 09:10
500-137894-8	Petraitis	Water	11/28/17 11:15	11/30/17 09:10
500-137894-9	Mast	Water	11/28/17 11:45	11/30/17 09:10

Client Sample Results

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-137894-1

Client Sample ID: MW-4
Date Collected: 11/28/17 11:50
Date Received: 11/30/17 09:10

Lab Sample ID: 500-137894-1
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.50**		0.50	0.19	ug/L		11/30/17 15:12	12/01/17 15:44	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.19		0.50	0.19	ug/L		11/30/17 15:12	12/01/17 16:23	1

Client Sample Results

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-137894-1

Client Sample ID: MW-5
Date Collected: 11/28/17 12:50
Date Received: 11/30/17 09:10

Lab Sample ID: 500-137894-2
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**12.0**		0.50	0.19	ug/L		11/30/17 15:12	12/01/17 16:26	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.19		0.50	0.19	ug/L		11/30/17 15:12	12/01/17 16:30	1

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-137894-1

Client Sample ID: MW-3
Date Collected: 11/28/17 13:15
Date Received: 11/30/17 09:10

Lab Sample ID: 500-137894-3
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.86**		0.50	0.19	ug/L		11/30/17 15:12	12/01/17 16:41	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.19		0.50	0.19	ug/L		11/30/17 15:12	12/01/17 16:45	1

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-137894-1

Client Sample ID: MW-1
Date Collected: 11/28/17 13:35
Date Received: 11/30/17 09:10

Lab Sample ID: 500-137894-4
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.87**		0.50	0.19	ug/L		11/30/17 15:12	12/01/17 16:49	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.19		0.50	0.19	ug/L		11/30/17 15:12	12/01/17 16:53	1

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-137894-1

Client Sample ID: Peterson
Date Collected: 11/28/17 11:00
Date Received: 11/30/17 09:10

Lab Sample ID: 500-137894-5
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.73		0.50	0.19	ug/L		11/30/17 15:12	12/01/17 16:57	1

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-137894-1

Client Sample ID: Burgeson
Date Collected: 11/28/17 11:05
Date Received: 11/30/17 09:10

Lab Sample ID: 500-137894-6
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.19		0.50	0.19	ug/L		11/30/17 15:12	12/01/17 17:00	1

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-137894-1

Client Sample ID: Witter
Date Collected: 11/28/17 11:35
Date Received: 11/30/17 09:10

Lab Sample ID: 500-137894-7
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.64**		0.50	0.19	ug/L		11/30/17 15:12	12/01/17 17:04	1

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-137894-1

Client Sample ID: Petraitis
Date Collected: 11/28/17 11:15
Date Received: 11/30/17 09:10

Lab Sample ID: 500-137894-8
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.24	J	0.50	0.19	ug/L		11/30/17 15:12	12/01/17 17:11	1

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-137894-1

Client Sample ID: Mast
Date Collected: 11/28/17 11:45
Date Received: 11/30/17 09:10

Lab Sample ID: 500-137894-9
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1.6		0.50	0.19	ug/L		11/30/17 15:12	12/01/17 17:15	1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Metals

Prep Batch: 412060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-137894-1	MW-4	Dissolved	Water	3005A	
500-137894-1	MW-4	Total Recoverable	Water	3005A	
500-137894-2	MW-5	Dissolved	Water	3005A	
500-137894-2	MW-5	Total Recoverable	Water	3005A	
500-137894-3	MW-3	Dissolved	Water	3005A	
500-137894-3	MW-3	Total Recoverable	Water	3005A	
500-137894-4	MW-1	Dissolved	Water	3005A	
500-137894-4	MW-1	Total Recoverable	Water	3005A	
500-137894-5	Peterson	Total Recoverable	Water	3005A	
500-137894-6	Burgeson	Total Recoverable	Water	3005A	
500-137894-7	Witter	Total Recoverable	Water	3005A	
500-137894-8	Petraitis	Total Recoverable	Water	3005A	
500-137894-9	Mast	Total Recoverable	Water	3005A	
MB 500-412060/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-412060/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-137894-1 MS	MW-4	Total Recoverable	Water	3005A	
500-137894-1 MSD	MW-4	Total Recoverable	Water	3005A	
500-137894-1 DU	MW-4	Total Recoverable	Water	3005A	

Analysis Batch: 412352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-137894-1	MW-4	Dissolved	Water	6020A	412060
500-137894-1	MW-4	Total Recoverable	Water	6020A	412060
500-137894-2	MW-5	Dissolved	Water	6020A	412060
500-137894-2	MW-5	Total Recoverable	Water	6020A	412060
500-137894-3	MW-3	Dissolved	Water	6020A	412060
500-137894-3	MW-3	Total Recoverable	Water	6020A	412060
500-137894-4	MW-1	Dissolved	Water	6020A	412060
500-137894-4	MW-1	Total Recoverable	Water	6020A	412060
500-137894-5	Peterson	Total Recoverable	Water	6020A	412060
500-137894-6	Burgeson	Total Recoverable	Water	6020A	412060
500-137894-7	Witter	Total Recoverable	Water	6020A	412060
500-137894-8	Petraitis	Total Recoverable	Water	6020A	412060
500-137894-9	Mast	Total Recoverable	Water	6020A	412060
MB 500-412060/1-A	Method Blank	Total Recoverable	Water	6020A	412060
LCS 500-412060/2-A	Lab Control Sample	Total Recoverable	Water	6020A	412060
500-137894-1 MS	MW-4	Total Recoverable	Water	6020A	412060
500-137894-1 MSD	MW-4	Total Recoverable	Water	6020A	412060
500-137894-1 DU	MW-4	Total Recoverable	Water	6020A	412060

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-412060/1-A
Matrix: Water
Analysis Batch: 412352

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 412060

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.19		0.50	0.19	ug/L		11/30/17 15:12	12/01/17 15:36	1

Lab Sample ID: LCS 500-412060/2-A
Matrix: Water
Analysis Batch: 412352

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 412060

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	100	105.1		ug/L		105	80 - 120

Lab Sample ID: 500-137894-1 MS
Matrix: Water
Analysis Batch: 412352

Client Sample ID: MW-4
Prep Type: Total Recoverable
Prep Batch: 412060

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.50		100	106.4		ug/L		106	75 - 125

Lab Sample ID: 500-137894-1 MSD
Matrix: Water
Analysis Batch: 412352

Client Sample ID: MW-4
Prep Type: Total Recoverable
Prep Batch: 412060

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	0.50		100	105.0		ug/L		104	75 - 125	1	20

Lab Sample ID: 500-137894-1 DU
Matrix: Water
Analysis Batch: 412352

Client Sample ID: MW-4
Prep Type: Total Recoverable
Prep Batch: 412060

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead	0.50		0.508		ug/L		1	20

Lab Chronicle

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-137894-1

Client Sample ID: MW-4
Date Collected: 11/28/17 11:50
Date Received: 11/30/17 09:10

Lab Sample ID: 500-137894-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			412060	11/30/17 15:12	BDE	TAL CHI
Dissolved	Analysis	6020A		1	412352	12/01/17 16:23	FXG	TAL CHI
Total Recoverable	Prep	3005A			412060	11/30/17 15:12	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	412352	12/01/17 15:44	FXG	TAL CHI

Client Sample ID: MW-5
Date Collected: 11/28/17 12:50
Date Received: 11/30/17 09:10

Lab Sample ID: 500-137894-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			412060	11/30/17 15:12	BDE	TAL CHI
Dissolved	Analysis	6020A		1	412352	12/01/17 16:30	FXG	TAL CHI
Total Recoverable	Prep	3005A			412060	11/30/17 15:12	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	412352	12/01/17 16:26	FXG	TAL CHI

Client Sample ID: MW-3
Date Collected: 11/28/17 13:15
Date Received: 11/30/17 09:10

Lab Sample ID: 500-137894-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			412060	11/30/17 15:12	BDE	TAL CHI
Dissolved	Analysis	6020A		1	412352	12/01/17 16:45	FXG	TAL CHI
Total Recoverable	Prep	3005A			412060	11/30/17 15:12	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	412352	12/01/17 16:41	FXG	TAL CHI

Client Sample ID: MW-1
Date Collected: 11/28/17 13:35
Date Received: 11/30/17 09:10

Lab Sample ID: 500-137894-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			412060	11/30/17 15:12	BDE	TAL CHI
Dissolved	Analysis	6020A		1	412352	12/01/17 16:53	FXG	TAL CHI
Total Recoverable	Prep	3005A			412060	11/30/17 15:12	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	412352	12/01/17 16:49	FXG	TAL CHI

Client Sample ID: Peterson
Date Collected: 11/28/17 11:00
Date Received: 11/30/17 09:10

Lab Sample ID: 500-137894-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			412060	11/30/17 15:12	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	412352	12/01/17 16:57	FXG	TAL CHI

Lab Chronicle

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-137894-1

Client Sample ID: Burgeson

Lab Sample ID: 500-137894-6

Date Collected: 11/28/17 11:05
Matrix: Water
Date Received: 11/30/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			412060	11/30/17 15:12	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	412352	12/01/17 17:00	FXG	TAL CHI

Client Sample ID: Witter

Lab Sample ID: 500-137894-7

Date Collected: 11/28/17 11:35
Matrix: Water
Date Received: 11/30/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			412060	11/30/17 15:12	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	412352	12/01/17 17:04	FXG	TAL CHI

Client Sample ID: Petraitis

Lab Sample ID: 500-137894-8

Date Collected: 11/28/17 11:15
Matrix: Water
Date Received: 11/30/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			412060	11/30/17 15:12	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	412352	12/01/17 17:11	FXG	TAL CHI

Client Sample ID: Mast

Lab Sample ID: 500-137894-9

Date Collected: 11/28/17 11:45
Matrix: Water
Date Received: 11/30/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			412060	11/30/17 15:12	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	412352	12/01/17 17:15	FXG	TAL CHI

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Accreditation/Certification Summary

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-137894-1

Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-18

TestAmerica

THE LEADER IN ENVIRONMENTAL TE[STING]

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.52

500-137894 COC

Report To (optional)	Bill To (optional)
Contact:	Contact:
Company:	Company:
Address:	Address:
Address:	Address:
Phone:	Phone:
Fax:	Fax:
E-Mail:	PO#/Reference#

Chain of Custody Record

Lab Job #: 500-137894

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 1.1 → 2.6

Client	Cedar Corp
Client Project #	2481
Project Name	WDNR - Lee Farm
Project Location/State	Woodville, WI
Lab Project #	
Sampler	KAL
Lab PM	Sandie Fredrick

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Total Lead (Preservative 3)	(Filtered) Dis. Lead (Preservative 3)	Comments
1		MW-4	11/28/17	1150	2	W	X	X	
2		MW-5	↓	1250	2	↓	↓	X	
3		MW-3	↓	1315	2	↓	↓	X	
4		MW-1	↓	1335	2	↓	↓	X	
5		Peterson	↓	1100	1	↓	↓		
6		Burgeson	↓	1105	1	↓	↓		
7		Witter	↓	1135	1	↓	↓		
8		Petraitis	↓	1115	1	↓	↓		
9		Mast	↓	1145	1	↓	↓		

Turnaround Time Required (Business Days)

__ 1 Day __ 2 Days __ 5 Days __ 7 Days __ 10 Days __ 15 Days ____ Other

Requested Due Date ______

Sample Disposal

[ ] Return to Client [X] Disposal by Lab [ ] Archive for ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Kristin [illegible]	Cedar Corp	11/28/17	1400	[signature]	TA-Chi	11/30/17	0910

Lab Courier:

Shipped: FedX

Hand Delivered:

Matrix Key

WW – Wastewater	SE – Sediment
W – Water	SO – Soil
S – Soil	L – Leachate
SL – Sludge	WI – Wipe
MS – Miscellaneous	DW – Drinking Water
OL – Oil	O – Other
A – Air	

Client Comments: Please report each well/resident individually per sheet

Lab Comments:

Login Sample Receipt Checklist

Client: Cedar Corporation

Job Number: 500-137894-1

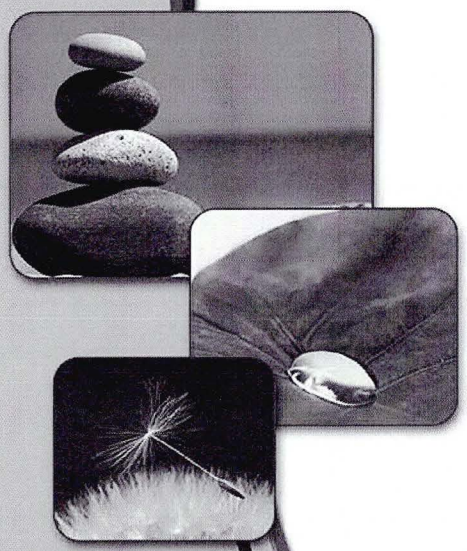
Login Number: 137894
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-138424-1
Client Project/Site: WDNR Lee Farm - 2481

For:
Cedar Corporation
604 Wilson Avenue
Menomonie, Wisconsin 54751

Attn: Mitch Evenson

Sandie Fredrick

Authorized for release by:
12/12/2017 3:55:11 PM

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

Table of Contents

Case Narrative

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-138424-1

Job ID: 500-138424-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-138424-1

Comments
No additional comments.

Receipt
The sample was received on 12/9/2017 10:25 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4° C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-138424-1

Client Sample ID: Ihrke

Lab Sample ID: 500-138424-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.36	J	0.50	0.19	ug/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-138424-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL CHI

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-138424-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-138424-1	Ihrke	Water	12/08/17 11:30	12/09/17 10:25

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-138424-1

Client Sample ID: Ihrke
Date Collected: 12/08/17 11:30
Date Received: 12/09/17 10:25

Lab Sample ID: 500-138424-1
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.36	J	0.50	0.19	ug/L		12/11/17 07:08	12/12/17 14:33	1

Definitions/Glossary

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-138424-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

QC Association Summary

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-138424-1

Metals

Prep Batch: 413217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-138424-1	lhrke	Total Recoverable	Water	3005A	
MB 500-413217/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-413217/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 413452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-138424-1	lhrke	Total Recoverable	Water	6020A	413217
MB 500-413217/1-A	Method Blank	Total Recoverable	Water	6020A	413217
LCS 500-413217/2-A	Lab Control Sample	Total Recoverable	Water	6020A	413217

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-413217/1-A
Matrix: Water
Analysis Batch: 413452

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 413217

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.19		0.50	0.19	ug/L		12/11/17 07:08	12/12/17 14:26	1

Lab Sample ID: LCS 500-413217/2-A
Matrix: Water
Analysis Batch: 413452

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 413217

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	100	106.6		ug/L		107	80 - 120

Lab Chronicle

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-138424-1

Client Sample ID: Ihrke

Date Collected: 12/08/17 11:30
Date Received: 12/09/17 10:25

Lab Sample ID: 500-138424-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			413217	12/11/17 07:08	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	413452	12/12/17 14:33	FXG	TAL CHI

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Accreditation/Certification Summary

Client: Cedar Corporation
Project/Site: WDNR Lee Farm - 2481

TestAmerica Job ID: 500-138424-1

Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999580010	08-31-18

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

Chain of Custody Record

Lab Job #: 500-138424

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 3.4

Report To (optional)		Bill To (optional)	
Contact:	Mitchell Evenson	Contact:	
Company:		Company:	
Address:		Address:	
Address:		Address:	
Phone:		Phone:	
Fax:		Fax:	
E-Mail:		PO#/Reference#	

Client	Cedar Corp	Client Project #	2481
Project Name	WDNR - Lee Farm		
Project Location/State	Woodville, WI	Lab Project #	
Sampler	KAL	Lab PM	Sandie Fredrick

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	Parameter: Total Pb	Comments
1		1hrKL	12/8/17	1130	1	W	3	X	

500-138424 COC

Turnaround Time Required (Business Days)

___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other

Requested Due Date _____

Sample Disposal: [ ] Return to Client [X] Disposal by Lab [ ] Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Kristie Lee	Cedar Corp	12/8/17	12:30	[illegible]	TALHT	12/9/17	1025

Lab Courier:

Shipped: FX SATURDAY

Hand Delivered:

Matrix Key

WW – Wastewater	SE – Sediment
W – Water	SO – Soil
S – Soil	L – Leachate
SL – Sludge	WI – Wipe
MS – Miscellaneous	DW – Drinking Water
OL – Oil	O – Other
A – Air	

Client Comments:

Lab Comments:

Login Sample Receipt Checklist

Client: Cedar Corporation

Job Number: 500-138424-1

Login Number: 138424
List Number: 1
Creator: Sanchez, Ariel M

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	