Cedar corporation

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

604 Wilson Avenue
Menomonie, WI 54751
715-235-9081
800-472-7372
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www.cedarcorp.com

RECEIVED
MAR 1 2017
Remediation & Redevelopment

March 1, 2017

Burnett County Highway Department
Attn: Michael R. Hoefs, P.E., Highway Commissioner
8150 STH 70
Siren, WI 54872

SUBJECT: Update on Additional Services to Address Chlorides Contamination
Burnett County Highway Shop, Siren, WI 54872

Dear Mr. Hoefs:

On February 20th, 2017, Geiss Soil and Samples, under the direction of a Cedar Corporation geologist, completed three soil borings along the eastern property line at the Burnett County Highway Shop. Groundwater samples from each boring were field tested for chloride concentration, and a new monitoring well (MW-9), was constructed adjacent to the eastern property line where chloride concentrations were seen to be the highest. After development of MW-9, Cedar Corporation collected groundwater samples from 7 of the 9 monitoring wells on the property. These samples were sent to a lab and analyzed for chloride concentration. The lab report with the results from the samples collected on February 20th is attached. Table 1, below, includes the results for all of the groundwater chloride sampling that has been done on the property to date.

Table 1

	Well Locations												
	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	Siren Motor	Nelson	Dahl	Koch
Date	Chloride Concentration in Parts Per Million, NR140 Table 1 **ES = 250**, *PAL = 125*												
5/16/2001	14												
10/1/2010	**770**	**720**	**680**	8.8	**690**	85	31	**300**		*200*	20	39	
2/1/2011	**450**	**460**		15	**440**	82	12	**400**		*200*	16	27	67
2/20/2017	**919**	**593**	107		**1510**	110	63.5		107				

In comparison with previously collected groundwater chloride data, the results of the groundwater samples collected on February 20th indicate that chloride concentrations in the groundwater at the Burnett County Highway Shop property are generally unchanged. Three additional rounds of groundwater sampling are planned for 2017, which will include all of the wells sampled in February, along with the addition of MW-8. Two rounds of groundwater samples will also be collected at Siren Motors.

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

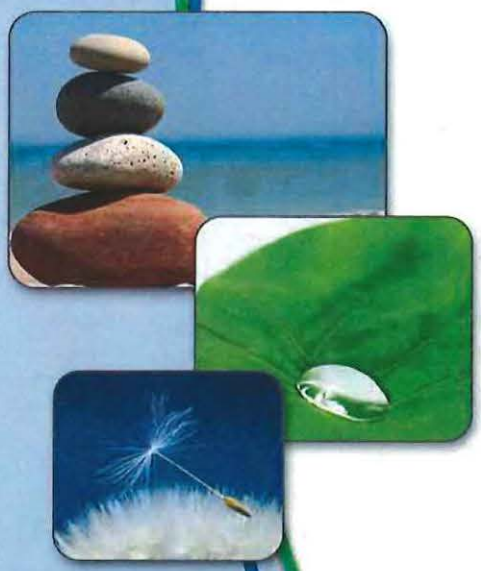
Sincerely,

CEDAR CORPORATION

Josh Leable, Staff Geologist

Attachment

cc: Ralph Smith, WDNR Project Manager



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: 500-124184-1
Client Project/Site: Burnett Cty Hwy Shop

For:
Cedar Corporation
604 Wilson Avenue
Menomonie, Wisconsin 54751

Attn: Scott McCurdy

Sandie Fredrick

Authorized for release by:
2/28/2017 2:39:10 PM

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

..... LINKS .....

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.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.

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Case Narrative

Client: Cedar Corporation
Project/Site: Burnett Cty Hwy Shop

TestAmerica Job ID: 500-124184-1

Job ID: 500-124184-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-124184-1

Comments
No additional comments.

Receipt
The samples were received on 2/22/2017 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was -0.3° C.

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

Detection Summary

Client: Cedar Corporation
Project/Site: Burnett Cty Hwy Shop

TestAmerica Job ID: 500-124184-1

Client Sample ID: MW-1 — Lab Sample ID: 500-124184-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	919		40.0	15.2	mg/L	200		300.0	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 500-124184-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	593		40.0	15.2	mg/L	200		300.0	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 500-124184-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	107		5.0	1.9	mg/L	25		300.0	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 500-124184-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1510		100	38.0	mg/L	500		300.0	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 500-124184-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	110		5.0	1.9	mg/L	25		300.0	Total/NA

Client Sample ID: MW-7 — Lab Sample ID: 500-124184-6

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	63.5		5.0	1.9	mg/L	25		300.0	Total/NA

Client Sample ID: MW-9 — Lab Sample ID: 500-124184-7

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Chloride	107		5.0	1.9	mg/L	25		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Cedar Corporation
Project/Site: Burnett Cty Hwy Shop

TestAmerica Job ID: 500-124184-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL CHI

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

Laboratory References:

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

Sample Summary

Client: Cedar Corporation
Project/Site: Burnett Cty Hwy Shop

TestAmerica Job ID: 500-124184-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-124184-1	MW-1	Water	02/20/17 13:20	02/22/17 10:30
500-124184-2	MW-2	Water	02/20/17 13:40	02/22/17 10:30
500-124184-3	MW-3	Water	02/20/17 14:10	02/22/17 10:30
500-124184-4	MW-5	Water	02/20/17 14:50	02/22/17 10:30
500-124184-5	MW-6	Water	02/20/17 14:40	02/22/17 10:30
500-124184-6	MW-7	Water	02/20/17 14:30	02/22/17 10:30
500-124184-7	MW-9	Water	02/20/17 15:00	02/22/17 10:30

Client Sample ID: MW-1
Date Collected: 02/20/17 13:20
Date Received: 02/22/17 10:30

Lab Sample ID: 500-124184-1
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	919		40.0	15.2	mg/L			02/27/17 14:45	200

Client Sample ID: MW-2
Date Collected: 02/20/17 13:40
Date Received: 02/22/17 10:30

Lab Sample ID: 500-124184-2
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	593		40.0	15.2	mg/L			02/27/17 15:22	200

Client Sample ID: MW-3
Date Collected: 02/20/17 14:10
Date Received: 02/22/17 10:30

Lab Sample ID: 500-124184-3
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	107		5.0	1.9	mg/L			02/27/17 15:34	25

Client Sample ID: MW-5
Date Collected: 02/20/17 14:50
Date Received: 02/22/17 10:30

Lab Sample ID: 500-124184-4
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1510		100	38.0	mg/L			02/27/17 15:46	500

Client Sample ID: MW-6
Date Collected: 02/20/17 14:40
Date Received: 02/22/17 10:30

Lab Sample ID: 500-124184-5
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	110		5.0	1.9	mg/L			02/27/17 15:59	25

Client Sample ID: MW-7
Date Collected: 02/20/17 14:30
Date Received: 02/22/17 10:30

Lab Sample ID: 500-124184-6
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	63.5		5.0	1.9	mg/L			02/27/17 16:11	25

Client Sample ID: MW-9
Date Collected: 02/20/17 15:00
Date Received: 02/22/17 10:30

Lab Sample ID: 500-124184-7
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	107		5.0	1.9	mg/L			02/27/17 16:23	25

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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: Burnett Cty Hwy Shop

TestAmerica Job ID: 500-124184-1

General Chemistry

Analysis Batch: 373830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-124184-1	MW-1	Total/NA	Water	300.0	
500-124184-2	MW-2	Total/NA	Water	300.0	
500-124184-3	MW-3	Total/NA	Water	300.0	
500-124184-4	MW-5	Total/NA	Water	300.0	
500-124184-5	MW-6	Total/NA	Water	300.0	
500-124184-6	MW-7	Total/NA	Water	300.0	
500-124184-7	MW-9	Total/NA	Water	300.0	
MB 500-373830/3	Method Blank	Total/NA	Water	300.0	
LCS 500-373830/4	Lab Control Sample	Total/NA	Water	300.0	

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-373830/3
Matrix: Water
Analysis Batch: 373830

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.076		0.20	0.076	mg/L			02/27/17 10:27	1

Lab Sample ID: LCS 500-373830/4
Matrix: Water
Analysis Batch: 373830

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.00	2.84		mg/L		95	90 - 110

Lab Chronicle

Client: Cedar Corporation
Project/Site: Burnett Cty Hwy Shop

TestAmerica Job ID: 500-124184-1

Client Sample ID: MW-1
Date Collected: 02/20/17 13:20
Date Received: 02/22/17 10:30

Lab Sample ID: 500-124184-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		200	373830	02/27/17 14:45	EAT	TAL CHI

Client Sample ID: MW-2
Date Collected: 02/20/17 13:40
Date Received: 02/22/17 10:30

Lab Sample ID: 500-124184-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		200	373830	02/27/17 15:22	EAT	TAL CHI

Client Sample ID: MW-3
Date Collected: 02/20/17 14:10
Date Received: 02/22/17 10:30

Lab Sample ID: 500-124184-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		25	373830	02/27/17 15:34	EAT	TAL CHI

Client Sample ID: MW-5
Date Collected: 02/20/17 14:50
Date Received: 02/22/17 10:30

Lab Sample ID: 500-124184-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		500	373830	02/27/17 15:46	EAT	TAL CHI

Client Sample ID: MW-6
Date Collected: 02/20/17 14:40
Date Received: 02/22/17 10:30

Lab Sample ID: 500-124184-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		25	373830	02/27/17 15:59	EAT	TAL CHI

Client Sample ID: MW-7
Date Collected: 02/20/17 14:30
Date Received: 02/22/17 10:30

Lab Sample ID: 500-124184-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	A alysis	300.0		25	373830	02/27/17 16:11	EAT	TAL CHI

Lab Chronicle

Client: Cedar Corporation
Project/Site: Burnett Cty Hwy Shop

TestAmerica Job ID: 500-124184-1

Client Sample ID: MW-9
Date Collected: 02/20/17 15:00
Date Received: 02/22/17 10:30

Lab Sample ID: 500-124184-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		25	373830	02/27/17 16:23	EAT	TAL CHI

Laboratory References:

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

Certification Summary

Client: Cedar Corporation
Project/Site: Burnett Cty Hwy Shop

TestAmerica Job ID: 500-124184-1

Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999580010	08-31-17

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

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

(optional)
Report To
Contact: Scott McCurdy
Company: Cedar Corporation
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

Chain of Custody Record

Lab Job #: 500-124184
Chain of Custody Number:
Page 1 of 1
Temperature °C of Cooler: -0.3

Client: Cedar Corporation
Client Project #:
Project Name: Burnett Cty Hwy Shop
Project Location/State: Siren, WI
Lab Project #:
Sampler: JAL
Lab PM: Sandie Fredrick

Preservative: 7
Parameter:

Key: 4° ... to 4°
500-124184 COC
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Chlorides									Comments
1		MW-1	2/20/17	1320	1	W	X									
2		MW-2	2/20/17	1340	1	W	X									
3		MW-3	2/20/17	1410	1	W	X									
4		MW-5	2/20/17	1450	1	W	X									
5		MW-6	2/20/17	1440	1	W	X									
6		MW-7	2/20/17	1430	1	W	X									
7		MW-9	2/20/17	1500	1	W	X									

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days X 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
[signature]	Cedar Corp	2/21/2017	1030	[signature]	TACHI	02/22/17	1030

Lab Courier:
Shipped: FX STD
Hand Delivered:

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

Client Comments

Lab Comments:

TAL-4124-500 (1209)

2/28/2017

Login Sample Receipt Checklist

Client: Cedar Corporation

Job Number: 500-124184-1

Login Number: 124184
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	-0.3
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	