# Additional

# Information

Water Analysis Received 11/27/2019



November 26, 2019

NATE ALLEMAN
ALL CONSULTING, LLC
1718 S. CHEYENNE AVE.
TULSA, OK 74119

RE: GW-1 WATER SAMPLES

Enclosed are the results of analyses for samples received by the laboratory on 11/12/19 13:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



ALL CONSULTING, LLC
NATE ALLEMAN
1718 S. CHEYENNE AVE.
TULSA OK, 74119
Fax To: NA

Received: 11/12/2019 Reported: 11/26/2019

Project Name: GW-1 WATER SAMPLES

Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/12/2019
Sampling Type: Water
Sampling Condition: Cool & Intac

Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

# Sample ID: C-02959 - GW-1 (H903838-02)

Bicarbonate 310.1	mg/	/L	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Alkalinity, Bicarbonate	156	5.00	11/13/2019	5.00	318			4.02	
BTEX 8021B	mg/	/L	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.001	0.001	11/13/2019	ND	0.020	99.3	0.0200	1.96	
Toluene*	< 0.001	0.001	11/13/2019	ND	0.020	99.5	0.0200	3.37	
Ethylbenzene*	< 0.001	0.001	11/13/2019	ND	0.021	103	0.0200	3.11	
Total Xylenes*	<0.003	0.003	11/13/2019	ND	0.060	101	0.0600	3.25	
Total BTEX	<0.006	0.006	11/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID

101 %

74-98

Received: 11/12/2019 Reported: 11/26/2019

Project Name: GW-1 WATER SAMPLES

Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/12/2019
Sampling Type: Water

Country Contribution

Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

### Sample ID: C-02959 - GW-1 (H903838-02)

Calcium 200.2 by ICP	mg,	/L	Analyze	d By: AES					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Calcium*	545	1.00	11/22/2019	ND	3.70	92.5	4.00	3.86	

Cardinal Laboratories \*=Accredited Analyte

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Received: 11/12/2019 Reported: 11/26/2019

Project Name: GW-1 WATER SAMPLES

NONE GIVEN

Project Location: NOT GIVEN

Sampling Date: 11/12/2019
Sampling Type: Water
Sampling Condition: Cool & Intact

Sample Received By:

Tamara Oldaker

### Sample ID: C-02959 - GW-1 (H903838-02)

Project Number:

Carbonate 310.1	mg,	/L	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Alkalinity, Carbonate	<1.00	1.00	11/13/2019	ND	ND				
Chloride, SM4500Cl-B	mg,	/L	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	96.0	4.00	11/13/2019	ND	104	104	100	0.00	
Conductivity 120.1	uS/	cm	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Conductivity*	3800	1.00	11/13/2019		52100	104	50000		
Received:	11/12/20	019		Sai	mpling Da	ite:	11/12/2	2019	
Reported:	11/26/20	019		Sai	mpling Ty	pe:	Water		
Project Name:	GW-1 W	ATER SAMPLES		Sai	mpling Co	ndition:	Cool &	Intact	
Project Number:	NONE G	IVEN		Sai	mple Rece	eived By:	Tamara	Oldaker	
Project Location:	NOT GIV	'EN							

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Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/12/2019
Sampling Type: Water
Sampling Condition: Cool & Intact

Sample Received By:

Tamara Oldaker

Sample ID: C-02959 - GW-1 (H903838-02)

Hardness, 200.2 Metals mg/L

Haraness, 200:2 Ficturs	1119	<u>,                                    </u>	Andryze	u by. ALS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Hardness as CaCO3	2000	6.62	11/22/2019						
Iron 200.2 by ICP	mg	/L	Analyze	d By: AES					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Iron*	0.198	0.500	11/22/2019	ND	3.78	94.6	4.00	2.21	J
Magnesium 200.2 by ICP	mg	/L	Analyze	d By: AES					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Magnesium*	155	1.00	11/22/2019	ND	19.4	96.9	20.0	3.17	

Analyzed By: AES

Received: 11/12/2019 Reported: 11/26/2019

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Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

### Sample ID: C-02959 - GW-1 (H903838-02)

рн	pl	H Units	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
pH*	8.75	0.100	11/13/2019		7.06	101	7.00		

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Mile Sough

Tamara Oldaker



### Analytical Results For:

ALL CONSULTING, LLC NATE ALLEMAN 1718 S. CHEYENNE AVE. TULSA OK, 74119 Fax To: NΑ

Received: 11/12/2019 Reported:

Project Name: **GW-1 WATER SAMPLES** 

Project Number: NONE GIVEN

Project Location: NOT GIVEN

Sampling Date: 11/12/2019 Sampling Type: Water 11/26/2019 Sampling Condition: Cool & Intact

Sample Received By:

Sample ID: C-02959 - GW-1 (H903838-02)

Potassium 200.2 by ICP **Analyzed By: AES** 

Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier Potassium\* 7.58 10.0 11/22/2019 ND 7.94 99.3 8.00 1.18

Received: 11/12/2019 Reported: 11/26/2019

Project Name: **GW-1 WATER SAMPLES** 

Project Number: NONE GIVEN Project Location: NOT GIVEN

Sampling Date: 11/12/2019 Sampling Type: Water

Sampling Condition: Cool & Intact Sample Received By: Tamara Oldaker

Sample ID: C-02959 - GW-1 (H903838-02)

Resistivity 120.1 Ohms/m Analyzed By: AC

Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier

Resistivity 2.63 11/13/2019

Received: 11/12/2019 Reported: 11/26/2019

Project Name: **GW-1 WATER SAMPLES** 

Project Number: NONE GIVEN Project Location: NOT GIVEN

Sampling Date: 11/12/2019 Sampling Type: Water

Sampling Condition: Cool & Intact Sample Received By: Tamara Oldaker

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Project Name: GW-1 WATER SAMPLES

NOT GIVEN

Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/12/2019
Sampling Type: Water

Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

### Sample ID: C-02959 - GW-1 (H903838-02)

Project Location:

Sodium 200.2 by ICP	mg	/L	Analyze	d By: AES					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sodium*	253	10.0	11/22/2019	ND	3.15	97.3	3.24	1.62	
Strontium 200.2 by ICP	mg	/L	Analyze	d By: AES					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Strontium*	7.93	1.00	11/22/2019	ND	3.90	97.4	4.00	0.764	
Received: Reported:	11/12/20 11/26/20	019		Sa	mpling Da	/pe:	11/12/2 Water		
Project Name: Project Number:	GW-1 W NONE G	ATER SAMPLES IVEN			mpling Co mple Reco		Cool & Tamara	Intact Oldaker	

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Sampling Date: 11/12/2019
Sampling Type: Water

Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

# Sample ID: C-02959 - GW-1 (H903838-02)

Sulfate 375.4	mg	/L	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Sulfate*	2160	500	11/13/2019	ND	19.5	97.4	20.0	1.60	
TDS 160.1	mg	/L	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	3480	5.00	11/19/2019	ND	564	107	527		
Total Alkalinity 310.1	mg	/L	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Alkalinity, Total*	128	4.00	11/13/2019	4.00	260	104	250	3.92	
TSS, 160.2	mg	/L	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TSS*	9.00	2.00	11/18/2019	ND					

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### **Notes and Definitions**

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC

batch were accepted based on percent recoveries and completeness of QC data.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

Estimated conentration. Analyte concentration between MDL and RL.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

all-11c, com	real-licitom, oseekingaal-licicom	leman@al- lc.l	TO 1/21/21	deledas	leujaka ived By:	Received	Date: 40	Relinquished By:
	Add'l Phone #:	It:	services hereunder by cardinal, regardless of whether such daim is based upon any of the above stated reasons or otherwise.    Date:	n claim is based upon an	dinal, regardless of whether such Received By:	Rece	or related to the performance of services hereunder by 0 Date:	affiliates or successors arising out of or related to the performance Relinguished By:
ŀ		e applicable s,	mited to the amount paid by the client for the dinal within 30 days after completion of the is of profits incurred by client, its subsidiarie	ontract or tort, shall be li ting and received by Car ptions, loss of use, or los	sing whether based in c lived unless made in wri	ny claim ari deemed wa without lim	PLEASE NOTE: Liability and Damages. Cardnat's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed walved unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries,	LEASE NOTE: Liability and Damag inalyses. All claims including those t ervice. In no event shall Cardinal be
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		777	11-12-19 8:35	17	1	C.	02325 614	1.0
			OTHE DATE TIME	SLUE OTHE ACID	GRO	10000	\ \ \	H903838
		at Me Har BT			UNDW	AB OR	Sample I.D.	Lab I.D.
		ions eta colvi			ATER			
		1/s	ERV. SAMPLING	X PRESERV.	MATRIX	٥.		FOR LAB USE ONLY
		15		Fax #:				Sampler Name:
		In.		Phone #:			scatt Meier	Project Location: 4
		101	Zip:	State:				Project Name:
		115		City:			Project Owner:	Project #:
				Address:			32 758/ Fax#:	Phone #: 9/8 38
			ate Allemon	Attn: ///	1114	Zip:	State: 0K	City: Tulsa
			: ALL CONSULTING	Company:	,	No	5 Cheyenne	Address: /7/8
				P.O. #:		2	Mote Alleman	Project Manager:
	ANALYSIS REQUEST	,	8111 70			1	HLL (MEUL) 17H	Company Name:

· c

Thermometer ID #97 Correction Factor + 0.4 °C

CHECKED BY: (Initials)

Turnaround Time:

Standard Rush

Bacteria (only) Sample Condition
Cool Intact Observed Temp. °C

Yes Yes
No No Corrected Temp. °C

Sampler - UPS - Bus - Other: Delivered By: (Circle One)

Observed Temp. °C 4.8 Corrected Temp. °C S. 2

Sample Condition
Cool Intact
Yes H Yes
No No

Time: Date: