APPROVED By Olivia Yu at 7:14 am, Jul 18, 2018



Ms. Olivia Yu New Mexico Oil Conservation Division – District I Environmental Specialist 1625 N French Drive Hobbs, New Mexico 88240

Subject:

Response to Comments on the Letter dated June 15, 2018 Regarding *2018 Remediation Activities – Scope of Work*, 2018 HES Transfer Site – State A-10, Lea county, New Mexico Case No. 1RP-3637

Dear Ms. Yu:

On behalf of Chevron U.S.A. Inc. under the direction of Chevron Environmental Management Company (CEMC), Arcadis U.S., Inc. (Arcadis) is providing this letter in response to the New Mexico Oil Conservation Division (NMOCD) comments regarding the *2018 Remediation Activities – Scope of Work*, 2018 HES Transfer Site – State A-10, Lea county, New Mexico received on June 15, 2018.

For ease of review, the comments are presented in italicized text, followed by the responses in standard text.

1. Were groundwater data from the monitoring wells previously submitted either to me or Mr. Bradford Billings? Pardon if I missed them in my inbox. Please resubmit the groundwater sampling results in electronic format.

Response:

Three monitoring wells (StateA10-MW1, StateA10-MW2 and StateA10-MW3) were installed at State A-10 in September 2016 (**Attachment 1**). Groundwater samples were collected and submitted to Xenco Laboratories (Xenco), a Texascertified laboratory, for the analysis of Chloride in accordance with United States Environmental Protection Agency (USEPA) Method 300/300.1 in September 2016 and June 2017. An electric copy of the groundwater sampling results from the State A-10 monitoring wells are provided in attached laboratory reports (**Attachment 2**). Analytical results are summarized in **Table 1**.

Arcadis U.S., Inc. 410 N. 44th Street Suite 1000 Roseville California 95678 Tel 916 786 0320 Fax 916 786 0366 www.arcadis.com

ENVIRONMENT

Contact: Brett Krehbiel

Date: June 28, 2018

Phone: 916.786.5382

Email: Brett.Krehbiel@arcadis.com

Our ref: B0048625.0A10

2. The release was a combination of oil and produced water. Were BTEX and TPH extended tested? If not, confirmation sidewalls and base of excavation will need to be tested for BTEX and TPH extended.

Response:

CEMC collected four soil samples (1, 2, 3, and 4) on July 6, 2015 to initially assess the impacted area at State A-10. The location of collected samples are presented in **Attachment 1**. Soil samples were collected in laboratory provided bottles and submitted to Cardinal Laboratories, a Texas-certified laboratory, for the following compounds:

- Benzene, toluene, ethylene, and xylenes (collectively referred to as BTEX) in accordance with United States Environmental Protection Agency (USEPA) Method 8021B
- Chloride in accordance with Standard Method 4500CI-B
- Total petroleum hydrocarbons (TPH) Gasoline Range Organics (GRO) and Diesel Range Organics (DRO) in accordance with USEPA Method 8015M

BTEX were detected below laboratory reporting limits. The laboratory report and chain of custody are presented in **Attachment 3**. Soil sample analytical results are summarized in **Table 2**.

In June 2016 and September 2017 Arcadis conducted an additional soil assessment to evaluate extent of the impacted area. Five soil borings (StateA10-01 through StateA10-05) were advanced to depths ranging 4 to 70 feet below ground surface (ft bgs) and two soil borings (StateA10-06 and StateA10-07) were advanced to 4 ft bgs. Boring locations are presented in **Attachment 1**. Soil samples were collected at depths summarized in **Table 2**. Soil samples were collected in laboratory provided containers and submitted to Xenco, to be analyzed for the following compounds:

- Chloride in accordance with USEPA Method 300/300.1
- TPH GRO and DRO in accordance with SW8015 Modified
- Percent moisture in accordance with American Standard Testing Materials (ASTM) International Method D2216
- pH in accordance with USEPA Method 9045C

Note, samples collected in September 2017 were only submitted for the analysis of chloride.

TPH GRO and DRO were detected below laboratory reporting limits. Chloride detections were below NMOCD regulatory limit of 600 mg/kg with the exception of the 70-foot sample from StateA10-02 at a concentration of 865 mg/kg. Due to the location of monitoring well StateA10-MW1 (downgradient of StateA10-02), chloride concentrations show no impact to groundwater. The analytical laboratory report is provided in **Attachment 3** and results are summarized in **Table 2**.

Ms. Yu June 28, 2018

3. In the subsequent report, please remember to include soil bore logs and the laboratory reports with chain of custody of the samples collected on July 6, 2015, in addition to the EM survey data as mentioned in the report. NMOCD do not appear to have any records aside from the initial C-141 for this release.

Response:

Comment noted. CEMC did not draft boring logs during the initial response. The laboratory report and chain of custody for the samples collected July 6, 2015 are presented in **Attachment 3**. The electromagnetic surveys survey data completed in December 2017 will be provided in a subsequent report.

Please contact me with any questions or concerns.

Sincerely,

Arcadis U.S., Inc.

+ hile O

Brett Krehbiel Certified Project Manager

Copies: Jason Michelson, Chevron Environmental Management Company Amy Barnhill, Mid-Continent Business Unit Bradford Billings, New Mexico Oil Conservation Division Greg Cutshall, Arcadis

Tables: Table 1 – State A-10 Groundwater Analytical Results Table 2 – State A-10 Soil Sample Analytical Results

Attachments:

Attachment 1 - Soil Boring and Groundwater Monitoring Well Locations - State A-10

Attachment 2 – Groundwater Analytical Laboratory Report

Attachment 3 – Soil Sample Analytical Laboratory Reports

TABLE 1

State A-10 Groundwater Analytical Results



Table 1Groundwater Analytical ResultsLea County, New Mexico



Well ID	Sample Date	Chloride ¹
StateA10-MW1	9/20/2016	82.3
StateA 10-WW	6/27/2017	66.7
	9/24/2016	128
StateA10-MW2	9/20/2016 (DUP)	135
StateA 10-WWVZ	6/27/2017	102
	6/27/2017 (DUP)	104
StateA10-MW3	9/24/2016	73.2
StateA 10-WWV5	6/27/2017	23.6
	9/20/2016	0.659
Equipment Blank	6/27/2017	<0.0858
Equipment Blank	8/15/2017	<0.500
	12/7/2017	<0.500

Notes

1. Chloride analyzed by EPA Method 300/300.1. Results reported in milligrams per liter (mg/L).

TABLE 2

State A-10 Soil Sample Analytical Results





Table 2 Soil Analytical Results Chevron EMC Moran No. 2-6 Site Assessment Lea County, New Mexico

Boring		Sample Depth	Benzene	Toluene		Total Xylenes	Total BTEX		TPH-DRO		%	
Location ID	Sample Date	(feet bgs)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Moisture	рН
1	7/6/2015	1	<0.050	<0.050	0.12	0.496	0.619	<50.0	9140	928		
2	7/6/2015	1	<0.200	<0.200	1.02	4.07	5.09	538	10800	832		
3	7/6/2015	1	<0.100	<0.100	0.10	0.929	1.03	167	6550	752		
4	7/6/2015	1	<0.050	<0.050	<0.050	<0.150	<0.300	<50.0	4190	512		
		4						<15.6	<15.6	441	4.23	8.22
StateA10-01	6/24/2016	10						<15.4	<15.4	<10.3	2.9	9.08
StateA 10-01	0/24/2010	20						<15.6	<15.6	<10.4	3.89	9.11
		30						<16.1	<16.1	<10.7	6.76	8.82
		4						<16.5	<16.5	86.4	9.44	9.41
		10						<16.5	<16.5	131	9.6	9.69
StateA10-02	6/24/2016	20						<17.2	<17.2	316	12.6	9.6
StateA 10-02		30						<15.9	<15.9	418	5.72	9.68
		50								1630		
		70								865		
		4						<15.6	<15.6	131	3.94	8.63
0	0/04/0040	10						<16.0	<16.0	73.7	6.18	8.97
StateA10-03	6/24/2016	20						<16.5	<16.5	<10.1	9.16	8.97
		30						<16.0	<16.0	<10.5	6.29	9.04
		4						<15.9	<15.9	94.3	5.73	8.12
		10						<18.0	<18.0	45.9	16.9	8.46
StateA10-04	6/24/2016	20						16	<15.1	29.5	<1.00	8.99
		30						<15.8	<15.8	<10.7	5.06	8.83
		4						<15.6	<15.6	47.5	3.84	8.92
		10						<16.2	<16.2	<10.8	7.45	9.04
StateA10-05	6/24/2016	20						<15.2	<15.2	14.2	1.61	9.27
		30						<16.3	<16.3	23.4	8.11	8.84
State A10-06	8/14/2017	4								16.5		
State A10-07	8/14/2017	4								120		

Below ground surface Benzene, toluene, ethylbenzene, and total xylenes Total Petroleum Hydrocarbons as Gasoline Range Organics Total Petroleum Hydrocarbons as Diesel Range Organics Percent

Legend:

mg/Kg	milligrams per killigram	bgs
NMOCD	New Mexico Oil Conservation Division	BTEX
USEPA	United States Evironmental Protection Agency	TPH-GRO
	Not analyzed or not applicable	TPH-DRO
<	Not detected above indicated laboratory reporting limit	%

Notes:

Regulatory limits are based on the New Mexico Oil Conservation Division "Guidelines for Remedation of Leaks, Spills, and Releases", August 13, 1993

ATTACHMENT 1

Soil Boring and Groundwater Monitoring Well Locations – State A-10



STATEA10-04 STATEA10-MW3 DATE 7/6/2015 DATE 6/24/2016 6/24/2016 6/24/2016 6/24/2016 DATE 7/6/2015 9/24/2016 6/27/2017 DEPTH DEPTH DEPTH DATE 4 10 20 30 CHLORIDE 23.6 CHLORIDE 752 CHLORIDE 94.3 45.9 29.5 CHLORIDE 73.2 <10.7 928 STATEA10-03 6/24/2016 6/24/2016 6/24/2016 6/24/2016 DATE DEPTH 4 10 20 30 CHLORIDE 131 73.7 <10.1 <10.5 STATEA10-05 TATEA10-DATE 6/24/2016 6/24/2016 6/24/2016 6/24/2016 DATE 7/6/2015 DEPTH 20 4 10 30 DEPTH 1 CHLORIDE 47.5 <10.8 14.2 23.4 CHLORIDE 512 TATEA10-05. STATEA10-07 LINES: STATEA10-07 **1 FLOW LINE** ATEA10-01 1 HIGH PRESSURE DATE 8/14/2017 2 GAS LINE DEPTH 4 DATE 7/6/2015 CHLORIDE 120 DEPTH **TATEA10-06** 1 STATEA10-02 CHLORIDE 832 TATEA1 STATEA10-06 UNDERGROUND ELECTRICAL DATE 8/14/2017 DEPTH 4 CHLORIDE 16.5 STATEA10-01 STATEA10-MW STATEA10-MW2 DATE 6/24/2016 6/24/2016 6/24/2016 6/24/2016 DATE 9/24/2016 6/27/2017 DEPTH 4 20 10 30 CHLORIDE 128 102 CHLORIDE 441 <10.4 <10.3 <10.7 STATEA10-MW2 (DUP) STATEA10-02 DATE 9/20/2016 6/27/2017 DATE 6/24/2016 6/24/2016 6/24/2016 6/24/2016 6/24/2016 6/24/2016 STATEA10-MW1 CHLORIDE 135 104 DEPTH 4 10 20 30 50 70 DATE 9/20/2016 6/27/2017 CHLORIDE 86.4 131 316 418 1,630 865 CHLORIDE 82.3 66.7 200' 100 LEGEND: NOTES: **GRAPHIC SCALE** JULY 2015 ASSESSMENT SOIL AERIAL PHOTOGRAPH FROM GOOGLE EARTH PRO. 1. VACUUM/LOVINGTON FUNCTIONAL MANAGEMENT SAMPLING LOCATION TEAM UNITS FMT REQUIRES BORING TO BE AT MINIMUM 10 FEET FROM 2. LEA COUNTY, NEW MEXICO SOIL BORING LOCATION UNDERGROUND UTILITIES. ۲ 2018 REMEDIATION ACTIVITIES SCOPE OF WORK ALL RESULTS ARE IN MILLIGRAMS PER KILOGRAM (mg/kg) FOR SOIL AND MILLIGRAMS PER LITER (mg/L) FOR GROUNDWATER. MONITORING WELL LOCATION З. **STATE A-10 SOIL AND GROUNDWATER** APPROXIMATE EXTENT OF **ANALYTICAL RESULTS** RELEASE NEW MEXICO OIL CONSERVATION DIVISION (NMOCD) SOIL REMEDIATION 4. ACTION LEVEL OF 250 mg/kg FOR LATERAL DELINEATION UNDERGROUND UTILITY LINE NMOCD SOIL REMEDIATION ACTION LEVEL OF 600 mg/kg FOR VERTICAL 5. FIGURE PROPOSED EXCAVATION AREA DELINEATION ARCADIS transformed

NMOCD GROUNDWATER REMEDIATION ACTION LEVEL OF 250 mg/L

6.

2

CITY: MANCHESTER DIV/GROUP: ENVCAD DB: B.SMALL PM: TM C:\Users\BSSmall\OneDrive - ARCADIS\BIM 360 Docs\CHEVRON CORPORATION\State A-10/2018\B0048625.1701\01-DWG\Data-Soil-Fig1.dwg LAYOUT: 2 SAVED: 4/26/2018 7:22 PM ACADVER: 20.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 5/1/2018 2:11 PM BY: SMALL, BRIAN

ATTACHMENT 2

Groundwater Analytical Lab Reports



Analytical Report 537535

for Arcadis - Houston

Project Manager: Jonathan Olsen

HES Transfer

04-OCT-16

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400) Xenco-San Antonio: Texas (T104704534) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



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04-OCT-16



Project Manager: **Jonathan Olsen Arcadis - Houston** 2929 Briarpark Dr., Ste 300 Houston, TX 77042

Reference: XENCO Report No(s): 537535 HES Transfer Project Address: Lovington NM

Jonathan Olsen:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 537535. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 537535 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Huns hoah

Kelsey Brooks Project Manager

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Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



Sample Cross Reference 537535



Arcadis - Houston, Houston, TX

HES Transfer

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	09-20-16 15:38	- 40 ft	537535-001
W	09-20-16 14:54		537535-004
W	09-20-16 13:15		537535-005
W	09-20-16 12:00		537535-006
W	09-20-16 00:00		537535-007
W	09-20-16 11:21		537535-008
W	09-20-16 10:13		537535-009
W	09-20-16 08:48		537535-010
S	09-20-16 15:43	- 50 ft	Not Analyzed
S	09-20-16 15:50	- 60 ft	Not Analyzed

(40')		

VGWU61-03B (40')
VGWU61-MW1
VGWU61-MW2
EB-1
DUP-1
StateA10-MW1
StateA10-MW2
StateA10-MW3
VGWU61-03B (50')
VGWU61-03B (60')

Sample Id



CASE NARRATIVE

RADA ACCREDUE

Client Name: Arcadis - Houston Project Name: HES Transfer

Project ID: Work Order Number(s): 537535
 Report Date:
 04-OCT-16

 Date Received:
 09/27/2016

Sample receipt non conformances and comments:

Direct bill to Chevron/PM Rob Speer

Sample receipt non conformances and comments per sample:

None



Project Id:Contact:Jonathan OlsenProject Location:Lovington NM

Certificate of Analysis Summary 537535

Arcadis - Houston, Houston, TX Project Name: HES Transfer



Date Received in Lab:Tue Sep-27-16 10:18 amReport Date:04-OCT-16Project Manager:Kelsey Brooks

Analysis Requested	Lab Id:	537535-0	01	537535-0	04	537535-005		537535-006		537535-007		537535-008	
	Field Id:	VGWU61-03	VGWU61-03B (40')		VGWU61-MW1		VGWU61-MW2			DUP-1		StateA10-MW1	
	Depth:	40 ft											
	Matrix:	SOIL	SOIL		WATER		WATER		ર	WATER		WATER	
	Sampled:	Sep-20-16	Sep-20-16 15:38		Sep-20-16 14:54		Sep-20-16 13:15		2:00	Sep-20-16 00:00		Sep-20-16 11:21	
Inorganic Anions by EPA 300/300.1	Extracted:	Oct-03-16	Oct-03-16 11:00		Oct-03-16 08:45		Oct-03-16 08:45		8:45	Oct-03-16 (08:45	Oct-03-16 08:45	
	Analyzed:	Oct-03-16	Oct-03-16 17:23		Oct-03-16 12:00		Oct-03-16 12:22		Oct-03-16 17:16		2:36	6 Oct-03-16 12:4	
	Units/RL:	mg/kg	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chloride		8.49	5.00	176	2.50	97.4	2.50	0.659	0.500	135	2.50	82.3	2.50

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Huns Boah

Kelsey Brooks Project Manager

Final 1.000



Project Id:Contact:Jonathan OlsenProject Location:Lovington NM

Certificate of Analysis Summary 537535

Arcadis - Houston, Houston, TX Project Name: HES Transfer



Date Received in Lab:Tue Sep-27-16 10:18 amReport Date:04-OCT-16Project Manager:Kelsey Brooks

Analysis Requested	Lab Id:	537535-0	09	537535-0	010		
	Field Id:	StateA10-N	1W2	StateA10-M	AW3		
	Depth:						
	Matrix:	WATE	٤	WATE	R		
	Sampled:	Sep-20-16 1	Sep-20-16 10:13		08:48		
Inorganic Anions by EPA 300/300.1	Extracted:	Oct-03-16 (8:45	Oct-03-16 (08:45		1
	Analyzed:	Oct-03-16 1	Oct-03-16 13:04		3:11		
	Units/RL:	mg/L	RL	mg/L	RL		
Chloride		128	2.50	73.2	2.50		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kelsey Brooks Project Manager

Final 1.000



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- **F** RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- RL Reporting Limit

MDL Method Detection Limit	SDL Sample Detection Limit	LOD Limit of Detection
PQL Practical Quantitation Limit	MQL Method Quantitation Limit	LOQ Limit of Quantitation

- **DL** Method Detection Limit
- NC Non-Calculable
- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	



BS / BSD Recoveries



Project Name: HES Transfer

Work Order #: 537535							Proj	ect ID:			
Analyst: MNR	D		Date Analyzed: 10/03/2016								
Lab Batch ID: 3001263 Sample: 714496-1-E	BKS	Batcl	h #: 1					Matrix: \	Water		
Units: mg/L		BLAN	K /BLANK	SPIKE / 1	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[D]	[U]		[E]	Kesuit [F]	[0]				
Chloride	< 0.500	25.0	25.3	101	25.0	26.1	104	3	90-110	20	
Analyst: MNR	D	ate Prepar	ed: 10/03/20	16			Date A	nalyzed:	10/03/2016		
Lab Batch ID: 3001267 Sample: 714494-1-E	BKS	Batcl	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / 1	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<5.00	250	269	108	250	261	104	3	90-110	20	

Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] = $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries

Project Name: HES Transfer



Work Order # :	537535						Project II):				
Lab Batch ID:	3001263	QC- Sample ID:	537535	-004 S	Ba	tch #:	1 Matrix	: Water				
Date Analyzed:	10/03/2016	Date Prepared:	10/03/2	016	Ar	alyst: N	MNR					
Reporting Units:	mg/L		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA'	FE REC	OVERY	STUDY		
Inorgan	nic Anions by EPA 300/300.1	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]	[0]	[D]	[E]	itesuit [1]	[G]	/0			
Chloride		176	125	308	106	125	313	110	2	90-110	20	
Lab Batch ID:	3001267	QC- Sample ID:	537535	-001 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	10/03/2016	Date Prepared:	10/03/2	016	Ar	alyst: N	MNR					
Reporting Units:	mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Inorgan	nic Anions by EPA 300/300.1	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]	[0]	[D]	[E]	itesuit [F]	[G]	/0			
Chloride		8.49	250	262	101	250	259	100	1	90-110	20	
Lab Batch ID:	3001267	QC- Sample ID:	537766	-003 S	Ba	tch #:	1 Matrix	: Soil	•		-	<u>.</u>
Date Analyzed:	10/03/2016	Date Prepared:	10/03/2	016	Ar	alyst: N	MNR					
Reporting Units:	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA'	FE REC	OVERY	STUDY		
Inorgan	nic Anions by EPA 300/300.1	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	Analytes	[A] 2270	[B] 1250	3520	[D] 100	[E] 1250	3550	[G] 102	1	90-110	20	

Matrix Spike Percent Recovery $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD = $200^{\circ}|(C-F)/(C+F)|$ Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

A State Stat			WHILE Laboratory returns with results	Distribution: WHILE	Distr	20730826 CofC AR Form 01.12.2007
PINK – Retained by ARCADIS			0011141 94			
Date/ Ime:	111 P Date/Time:	H-L	Date/Time: 9/_//////		Condition/Cooler Temp	Shipping Tracking #
		Kunco	calis	$\hat{(}$	Sample Receipt:	Specify Turnaround Requirements:
	l	JUNAMOR	X a	Not Intact Signa		Cooler packed with ice (V)
Civrostruo	LANN	ASSIGA	Jan Nanny	<	Cooler Custody Seal (*)	Lao Name: Xenco
Printed Name:	d By Relinquished By	Printed Name:	Relinquished By		ation and Receipt	Laboratory Information and Receipt
	ATX	* trans	*	pm: Rob Spr-	Bill to Chauren 1PM: Rob	Special Instructions/Comments:
	tructions(V):	Granist OA/OC Instructions(/):				
			(
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- And				۲ ۲	8480 9-42-6	StatzAlo-MW3
				۲ ۲	9-24-16 1013	STateAlo-MW2
			-	. ۲ ۶	9-23-16 1121	StateA10-MWZ THOM
				i h	9-24-16 -	
				<u></u> <u></u> <u></u> <u></u> <u></u> <u></u>	9-23-16 1200	
				2 2	9-23-16 1315	VEWUEL-MWZ
				<u>ح</u> ج	9-23-16 1454	-mu
	Hald			05 1	9-20-16 1550	1-03/3
	Hold			V 50		VGWU61-03B(50)
				N 20	9-20-16 1538	VGWU61-03B(40)
REMARKS	REM.		15	Comp Grab	Date Time	Sample ID
vey: SE - Sediment NL - NAPL/Ofi ter SL - Sludge SW - Sample Wipe ue A - Air Other:	SO - Soli W - Water T - Tissue		lorio		N a	111 4
10				5		, State):
ar 8, 8 oz. Glass 9. Other				- PArcelis.com	Jonathon, Olsan	Heysten to 770
6	AI YSIS & METHOD F. Othe	PARAMETER ANALYSIS	╞		E-mail Address:	nd City State Zip
9 3. 200 ml Plastic 4. 500 ml Plastic e 5. Encore	D. NaOH		Container 7			R 2929 Briver Park Dr. Suite 300
×.∼	A. H,S		_ >	4874	713. 753. 4	2 Joing they Oly Alticulis
on Key: Co	Presen		Preservative			Contact & Company Na
	Page <u> </u> of <u> </u>	UEST FORM	ANALYSIS REQUEST	AN,		infrastracture Weter Environment Buildings
Lab Work Orgert へへ		& LABORATORY	CHAIN OF CUSTODY & LABO	CHAIN C		ARCADIS

Page 11 of 13

Final 1.000





XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: Arcadis - Houston	Acceptable Temperature Range: 0 - 6 degC
Date/ Time Received: 09/27/2016 10:18:00 AM	Air and Metal samples Acceptable Range: Ambient
Work Order #: 537535	Temperature Measuring device used : R8
Sample Recei	pt Checklist Comments
#1 *Temperature of cooler(s)?	2.5
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	No
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	N/A
#21 VOC samples have zero headspace (less than 1/4 inch l	bubble)? N/A
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Is samples for the analysis of HEM or HEM-SGT which are verif analysts.	
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnA	c+NaOH? N/A

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer

Date: 09/27/2016

Checklist reviewed by: Mms Morah Kelsey Brooks

Date: 09/27/2016

Analytical Report 556451

for Arcadis - Roseville, CA

Project Manager: Brett Krehbiel

State A 10

06-JUL-17

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400) Xenco-San Antonio: Texas (T104704534) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



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06-JUL-17

Project Manager: **Brett Krehbiel Arcadis - Roseville, CA** 101 Creekside Ridge CT 200 Roseville, CA 95678

Reference: XENCO Report No(s): **556451 State A 10** Project Address: Buckeye NM

Brett Krehbiel:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 556451. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 556451 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Huns hoah

Kelsey Brooks Project Manager

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Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 556451



Arcadis - Roseville, CA, Roseville, CA

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-3-W-170627	W	06-27-17 11:03		556451-001
EB-1-W-170627	W	06-27-17 11:11		556451-002
MW-1-W-170627	W	06-27-17 11:26		556451-003
MW-2-W-170627	W	06-27-17 11:46		556451-004
DUP-01-W-170627	W	06-27-17 00:00		556451-005

CASE NARRATIVE SUMMARY



Client Name: Arcadis - Roseville, CA Project Name: State A 10

Project ID: Work Order Number: 556451 Report Date: 06-JUL-17 Date Received: 28-JUN-17

Huns Boah

Kelsey Brooks Project Manager

Certificate of Analytical Results 556451 Arcadis - Roseville, CA, Roseville, CA



Sample Id:	MW-3-W-170627		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	1: 556451-001		Date Collecte	ed: 06.27.17	11.03	Date R	eceived: 06.28.	17 10.0	00
Analytical Me	thod: Inorganic Anions by	EPA 300/300.1				Prep M	lethod: E300P		
Analyst:	MGO		% Moist:			Tech:	MGO		
Seq Number:	3021487		Date Prep: 06	5.30.17 13.30					
			Prep seq: 72	27067					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride		16887-00-6	23.6	0.500	0.0858	mg/L	06.30.17 14:02		1
Sample Id:	EB-1-W-170627		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	1: 556451-002		Date Collecte	ed: 06.27.17	11.11	Date R	eceived: 06.28.	17 10.0	00
Analytical Me	thod: Inorganic Anions by	EPA 300/300.1				Pren M	fethod: E300P		
Analyst:	MGO		% Moist:			Tech:	MGO		
Seq Number:	3021487		Date Prep: 07	7.03.17 16.00					
1			Prep seq: 72						
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride		16887-00-6	< 0.0858	0.500	0.0858	mg/L	07.04.17 03:41	U	1
Sample Id:	MW-1-W-170627		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	1: 556451-003		Date Collecte	ed: 06.27.17	11.26	Date R	eceived: 06.28.	17 10.0	00
Analytical Me	thod: Inorganic Anions by	EPA 300/300.1				Prep M	fethod: E300P		
Analyst:	MGO		% Moist:			Tech:	MGO		
Seq Number:	3021487		Date Prep: 06	5.30.17 13.30					
			Prep seq: 72	27067					
Paramete	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride		16887-00-6	66.7	0.500	0.0858	mg/L	06.30.17 14:33		1
Sample Id:	MW-2-W-170627		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	1: 556451-004		Date Collecte	ed: 06.27.17	11.46	Date R	eceived: 06.28.	17 10.0	00
Analytical Me	thod: Inorganic Anions by	EPA 300/300.1				Prep M	fethod: E300P		
Analyst:	MGO		% Moist:			Tech:	MGO		
Seq Number:	3021487		Date Prep: 06	5.30.17 13.30					
			Prep seq: 72	27067					
	r	CAS	Result	MQL	SDL	Units	Analysis	Flag	Dil Factor
Parameter	•	Number					Date	0	

Certificate of Analytical Results 556451 Arcadis - Roseville, CA, Roseville, CA

SOLP ACCREDING

Sample Id: DUP-01-W-170627	Matrix:	Water		Sample	e Depth:	
Lab Sample Id: 556451-005	Date Collecte	ed: 06.27.17 0	00.00	Date R	eceived: 06.28.	17 10.00
Analytical Method: Inorganic Anions by EPA 300/300.	.1			Prep M	lethod: E300P	
Analyst: MGO	% Moist:			Tech:	MGO	
Seq Number: 3021487	Date Prep: 06	5.30.17 13.30				
	Prep seq: 72	27067				
Parameter CAS Number	Result	MQL	SDL	Units	Analysis Date	Dil Factor Flag
Chloride 16887-00-6	104	2.50	0.429	mg/L	06.30.17 14:48	5

Certificate of Analytical Results 556451 Arcadis - Roseville, CA, Roseville, CA

Sample Id: 727067-1-BLK	Matrix:	Water		Sample	e Depth:		
Lab Sample Id: 727067-1-BLK	Date Collecte	d:		Date R	eceived:		
Analytical Method: Inorganic Anions by EPA 300/30	0.1			Prep M	lethod: E300P		
Analyst: MGO	% Moist:			Tech:	MGO		
Seq Number: 3021487	Date Prep: 06	5.30.17 13.30					
	Prep seq: 72	27067					
Parameter CAS Number	er Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride 16887-00-	-6 <0.0858	0.500	0.0858	mg/L	06.30.17 13:40	U	1

CHRONOLOGY OF HOLDING TIMES



Analytical Method :	Inorganic Anions by EPA 300/300.1
Work Order #:	556451

Date Received: 06/28/17

Client : Arcadis - Roseville, CA

Project ID:

Field Sample ID	Lab Sample ID	Date Collected	Date Extracted	Max Holding Time Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed (Days)	Q
MW-3-W-170627	556451-001	06/27/17			06/30/17	28	3	Р
EB-1-W-170627	556451-002	06/27/17			07/04/17	28	7	Р
MW-1-W-170627	556451-003	06/27/17			06/30/17	28	3	Р
MW-2-W-170627	556451-004	06/27/17			06/30/17	28	3	Р
DUP-01-W-170627	556451-005	06/27/17			06/30/17	28	3	Р

F = These samples were analyzed outside the recommended holding time.

P = Samples analyzed within the recommended holding time.

Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- **F** RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- RL Reporting Limit

MDL Method Detection Limit	SDL Sample Detection Limit	LOD Limit of Detection
PQL Practical Quantitation Limit	MQL Method Quantitation Limit	LOQ Limit of Quantitation

- **DL** Method Detection Limit
- NC Non-Calculable
- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	

Analytical Log

Analytical Method:	Inorganic Anions by EPA 300/300.1	Batch #:	3021487
Project Name:	State A 10	Project ID:	
Client Name:	Arcadis - Roseville, CA	WO Number:	556451

Client Sample Id	Lab Sample Id	QC Types				
DUP-01-W-170627	556451-005	SMP				
EB-1-W-170627	556451-002	SMP				
MW-1-W-170627	556451-003	SMP				
MW-2-W-170627	556451-004	SMP				
MW-3-W-170627	556451-001	SMP				
	556451-001 S	MS				
	556451-001 SD	MSD				
	727067-1-BKS	BKS				
	727067-1-BLK	BLK				
	727067-1-BSD	BSD				

BS / BSD Recoveries



Project Name: State A 10

Work Order #: 556451				Project ID:								
Analyst: MGO	Date Prepared: 06/30/2017				Date Analyzed: 06/30/2017							
Lab Batch ID: 3021487 Sample: 727067-1-E	Sample: 727067-1-BKS Batch #: 1				Matrix: Water							
Units: mg/L	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]		Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]					
Chloride	<0.0858	25.0	23.5	94	25.0	23.8	95	1	90-110	20		

Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] = $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: State A 10



Work Order # :	556451 Project ID:											
Lab Batch ID:	3021487	QC- Sample ID:	556451	-001 S	Ba	tch #:	1 Matrix	k: Water				
Date Analyzed:	06/30/2017	Date Prepared:	06/30/2	017	Ar	alyst: N	MGO					
Reporting Units:	mg/L	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Inorganic Anions by EPA 300/300.1		Parent Sample	Spike	Spiked Sample Result	Sample		Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
Analytes		Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Chloride		23.6	25.0	46.8	93	25.0	47.4	95	1	90-110	20	

Matrix Spike Percent Recovery $[D] = 100^{*}(C-A)/B$ Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.
Attachment A Laboratory Data Package Cover Page

Project Name:

This Data package consists of :

Laboratory Number: 556451

Laboratory Batch No(s) 727067

This signature page, the laboratory review checklist, and the following reportable data:

State A 10

- X R1 Field chain-of-custody documentation;
- X R2 Sample identification cross-reference;
- \mathbf{X} R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC 5
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
- X R4 Surrogate Recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
- X R5 Test reports/summary forms for blank samples;
- **X** R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
- X R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs) and
 - e) The laboratory's MS/MSD QC limits
- X R8 Laboratory anaytical duplicate (if applicable) recovery and precision:
 - a) the amount of analyte measured in the duplicate,
 - b) the calculated RPD, and
 - c) the laboratory's QC limits for analytical duplicates.

 \boxed{X} R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;

 \mathbf{X} R10 Other problems or anomalies.

X Exception Report for every "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies, observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [] This laboratory meets an exception under 30 TAC 25.6 and was last inspection by [] TCEQ or [] ______ on (enter date of last inspection). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Kelsey Brooks

Huns hoah

Name (Printed)

Signature

Project Manager
Official Title (printed)

06-JUL-17 Date

Labo	orator	y Name: XENCO LABORATORIES	LRC Date : 06-JUL-17					
Proje	ect Na	ame: State A 10	Laboratory Job Number : 556451					
Revi	ewer	Name: KEB	Batch Number(s): 727067					
#1	A ²	Description		Yes	No	NA ³	NR ⁴	
R1	OI	Chain-of-Custody (COC)	1	110	III	T		
		Did samples meet the laboratory's standard conditio	X				-	
		Were all departures from standard conditions descri			<u> </u>	X		
R2	01	Sample and Quality Control (QC) Identific	1		Α			
112		Are all field sample ID numbers cross-referenced to		X				-
		Are all laboratory ID numbers cross-referenced to the		X				-
R3	OI	Test Reports		1				
K 5		Were all samples prepared and analyzed within hold	ling times?	X				-
		Other than those results <mql, all="" other="" raw="" td="" v<="" were=""><td></td><td>X</td><td><u> </u></td><td></td><td></td><td>+</td></mql,>		X	<u> </u>			+
		Were calculations checked by a peer or supervisor?	-	X	<u> </u>			
		Were all analyte identifications checked by a peer of super visor.		X				-
		Were sample detection limits reported for all analyte	*	X				+
		Were all results for soil and sediment samples report		+		X		+
		Were % moisture (or solids) reported for all soil and		+	<u> </u>	X		+
		Were bulk soil/solid samples for volatile analysis ex	stracted with methanol per SW846 Method 5035?			X		1
		If required for the project, were TICs reported?				X		
R4	0	Surrogate Recovery Data		1				
		Were surrogates added prior to extraction?				X		
		Were surrogate percent recoveries in all samples wi	thin the laboratory QC limits?			X		
R5	OI	Test Reports/Summary Forms for Blank Sa	amples					
		Were appropriate type(s) of blanks analyzed?		X				
		Were blanks analyzed at the appropriate frequency	?	X				
		Were method blanks taken through the entire analyt procedures ?	ical procedure, including preparation and, if applicable, cleanup	X				
		Were Blank Concentrations <mql?< td=""><td></td><td>X</td><td></td><td></td><td></td><td></td></mql?<>		X				
R6	OI	Laboratory Control Samples (LCS):						
		Were all COCs included in the LCS?		X				
		Was each LCS taken through the entire analytical pr	rocedure, including prep and cleanup steps?	Х				
		Were LCSs analyzed at the required frequency?		X				
		• •	the laboratory QC limits? the laboratory's capability to detect the COCs at the MDL used to	X X				
		calculate the SDLs? Was the LCSD RPD within the QC limits?		X				-
R7	OI	Matrix Spike (MS) and Matrix Spike Dupli	icate (MSD) data	1				
		Were the project/method specified analytes included		X				
		Were MS/MSD analyzed at the appropriate frequent	cy?	Х				
		Were MS (and MSD, if applicable) %Rs within the	laboratory QC limits?	X				
		Were MS/MSD RPDs within the laboratory QC lim	its?	X				
R8	OI	Analytical Duplicate Data						
_		Were appropriate analytical duplicates analyzed for				X		
		Were analytical duplicates analyzed at the appropria	· ·			X		
		Were RPDs or relative standard deviations within the	ne laboratory QC limits?			X		
R9	OI	Method Quantitation Limits (MQLs)						
		Are the MQLs for each method analyte included in		X				
		Do the MQLs correspond to the concentration of the		X				
		Are unadjusted MQLs and DCSs included in the lab	poratory data package?	X				
R10	OI	Other Problems/Anomalies						
		Are all known problems/anomalies/special condition		X				
		methods associated with this laboratory data packag		X				
			wer the SDL to minimize the matrix interference effects on the	X	1	1		

Labo	rator							
Proje	ect Na	ame: State A 10	Laboratory Job Number: 556451					
Revi	ewer	Name: KEB	Batch Number(s) : 727067					
#1	A^2	Description		Yes	No	NA ³	NR ⁴	FR#
S 1	OI	Initial Calibration (ICAL)		1	110	1171		
		Were response factors and/or relative response factors	ctors for each analyte within OC limits?	X				-
		Were percent RSDs or correlation coefficient crite		X				
		Was the number of standards recommended in the		X				
		Were all points generated between the lowest and		X				
		Are ICAL data available for all instruments used?		X				-
		Has the initial calibration curve been verified usin		X				-
S2	OI		cation (ICCV and CCV) and continuing calibration blank	1				
		Was the CCV analyzed at the method-required fre	-	X				-
		Were percent differences for each analyte within t		X				
Was the ICAL curve verified for each analyte?				X				-
		Was the absolute value of the analyte concentration	on in the inorganic CCB <mdl?< td=""><td></td><td></td><td>X</td><td></td><td></td></mdl?<>			X		
S3 O Mass Spectral Tuni		Mass Spectral Tuning]				
	Was the appropriate compound for the method used for tuning?							
		Were ion abundance data within the method-requi	-			X		-
S4	0	Internal Standard (IS)	1					
		Were IS area counts and retention times within the	e method-required QC limits?			X		
S5	OI	Raw Data (NELAC 5.5.10)	1					
		Were the raw data (for example, chromatograms,	spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations fla	X				-	
S6	0	Dual Column Confirmation		1				
		Did dual column confirmation results meet the me	ethod-required QC?			X		-
S 7	0	Tentatively Identified Compounds (TICs)]				
		If TICs were requested, were the mass spectra and				X		
S 8	Ι	Interference Check Sample (ICS) Results		1				
		Were percent recoveries within method QC limits				X		
S 9	Ι	Serial Dilutions, Post Digestions Spikes, a	nd Method of Standard Additions	1				
			arity within the QC limits specified in the method?			X		
S10	OI	Method Detection Limit (MDL) Studies		1				
		Was a MDL study performed for each reported an	nalyte?	X				-
		Is the MDL either adjusted or supported by the an		X				-
511	OI	Proficiency Test Reports	-					
			he applicable proficiency tests or evaluation studies?	X				
512	OI	Standards Documentation		1				
		Are all standards used in the analyses NIST-tracea	able or obtained from other appropriate sources?	X				
\$13	OI	Compound/Analyte Identification Proced		1				
		Are the procedures for compound/analyte identified		X				
S14	OI	Demonstration of Analyst Competency (I		1				
-	<u> </u>	Was DOC conducted consistent with NELAC Cha		X				-
		Is documentation of the analyst's competency up-t		X	<u> </u>			+
\$15	OI	Verification/Validation Documentation for						
	<u> </u>	Are all methods used to generate the data docume		X				
S16	OI	-						
210	51	Laboratory Standard Operating Procedu	method performed?	X				\blacksquare

1. Items identified by the letter "R" must be included in the laboratory data package submitted to the TCEQ-required report(s). Items identified by

the letter "S" should be retained and made available upon request for the appropriate retention period. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).2.

NA = Not applicable;
 NR = Not reviewed;

5. ER# = Exception Report Identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Attachment A (cont'd): Laboratory Review Checklist: Exception Reports								
Laboratory Name: XENCO LABORATORIES	LRC Date: 06-JUL-17							
Project Name: State A 10	Laboratory Job Number: 556451							
Reviewer Name: KEB	Batch Number(s) : 727067							
ER# 1 DESCRIPTION								

1 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No is checked on the LRC).

DCS Summary



Arcadis - Roseville, CA, Roseville, CA

State A 10

Analytical Method: Inorganic Anions by EPA 300/300.1

Matrix: Water

Parameter	Spike Amount	Actual Amount	Units
Chloride	0.250	0.177	mg/L

ned by ARC.	Lab copy	YELLOW – Lab copy	WHITE - Laboratory returns with results	Distribution: WHITE	20730826 CofC AR Form 01.12.2007
Data (17 28/17 1000	Date/Time:	DaterTime: UV/27117 1VOL	hata 1602	Condition/Cooler Temp: 066	a Burerori Eurofence
From YEMLO	Firm/Courier:	Firm/Courier	ARCHARS		
NL D. M.	Signature	BUMMINGUM	and		Shock Unarround Requirements
Mary A Negron	Printed Name:	BRIDING WINNER	There is a surely Sike a guell	0	X Wes
Relinquished By Laboratory Received By	Relinqu	Received By	Relinquished By		Laboratory Information and Receipt
1.10		□ Special QA/QC Instructions(✓):			opecial instructions/comments:
Corrected Temp: 4 7%				W X XW	DUP-01-W-DOECT
(6-23: +0.2°C)				100	
CE-ID & OTO IR ID:R-8				1	
			Jan J		
			/		
			-	M Y 561 4	Wm-2-M-42024
				11 N	1700 01
				100 X	
				X 011	
Stek A-10 Somples			-	W X 103 X W	M62-3-12-170527
REMARKS	/ /		1 4 1	Time Comp Grab	
W - Water SL - Sludge SW - Sample Wipe T - Tissue A - Air Other:	/ /	/ / /	1 4 1	Collection Type (V) Matrix	Sample ID
SE - Sec	/	/ / /	/ / /	Sampler's Signifume:	Los
H. Other 9. Other 10. Other	/	/ / /		Filipera in	Stele A 10 Backeye, NM
0,00,7	/		- / / /	Brest. Krehbxlearcests.c	CA 52578
6.0	O	ANALYSIS & METHOD	PARAMETER ANA	E-mail Address:	City
			Container Information		+ 4 Soite 20
N :			# of Containers		Address:
			Filtered (V)	786-286-5382	Best Keckhich ARCATES
Keys			Preservative	Telephone:	Contact & Company Name:
Lab Work Order #	Page of		ANALYSIS REQUEST FO	AN	Whathicture Vater Environment Bublings
		BOBATOBY	CHAIN OF CHISTONY & I ABOBATOBY	CHAINO	DADCADIC ID#:

Page 19 of 20

Final 1.000



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: ARCADIS	Acceptable Temperature Range: 0 - 6 degC					
Date/ Time Received: 06/28/2017 10:00:00 AM	Air and Metal samples Acceptable Range: Ambient					
Work Order #: 556451	Temperature Measuring device used : R8					
Sample Recei	pt Checklist Comments					
#1 *Temperature of cooler(s)?	4.7					
#2 *Shipping container in good condition?	Yes					
#3 *Samples received on ice?	Yes					
#4 *Custody Seal present on shipping container/ cooler?	N/A					
#5 *Custody Seals intact on shipping container/ cooler?	N/A					
#6 Custody Seals intact on sample bottles?	N/A					
#7 *Custody Seals Signed and dated?	N/A					
#8 *Chain of Custody present?	Yes					
#9 Sample instructions complete on Chain of Custody?	Yes					
#10 Any missing/extra samples?	Νο					
#11 Chain of Custody signed when relinquished/ received?	Yes					
#12 Chain of Custody agrees with sample label(s)?	Yes					
#13 Container label(s) legible and intact?	Yes					
#14 Sample matrix/ properties agree with Chain of Custody?	Yes					
#15 Samples in proper container/ bottle?	Yes					
#16 Samples properly preserved?	Yes					
#17 Sample container(s) intact?	Yes					
#18 Sufficient sample amount for indicated test(s)?	Yes					
#19 All samples received within hold time?	Yes					
#20 Subcontract of sample(s)?	N/A					
#21 VOC samples have zero headspace?	N/A					

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst: JKR

PH Device/Lot#: 213315

Checklist completed by: Jessica Kramer

Date: 06/28/2017

Checklist reviewed by:

Date:

ATTACHMENT 3

Soil Sample Analytical Lab Reports





July 13, 2015

NICK MOSCHETTI Chevron - Lovington HCR 60 Box 423 Lovington, NM 88260

RE: SOIL SAMPLES

Enclosed are the results of analyses for samples received by the laboratory on 07/06/15 15:52.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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 www.tceq.texas.gov/field/ga/lab_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.

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,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



		Chevron - L NICK MOSC HCR 60 Box Lovington N	HETTI 423		
		Fax To:	None		
Received:	07/06/2015			Sampling Date:	07/06/2015
Reported:	07/13/2015			Sampling Type:	Soil
Project Name:	SOIL SAMPLES			Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN			Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN				

Sample ID: STATE A-10 1 (H501713-01)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/13/2015	ND	2.13	107	2.00	3.67	
Toluene*	<0.050	0.050	07/13/2015	ND	1.90	95.2	2.00	3.76	
Ethylbenzene*	0.123	0.050	07/13/2015	ND	1.82	91.1	2.00	4.21	
Total Xylenes*	0.496	0.150	07/13/2015	ND	5.38	89.6	6.00	4.75	
Total BTEX	0.619	0.300	07/13/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	120 9	% 61-154	1						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	928	16.0	07/09/2015	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	07/09/2015	ND	199	99.4	200	6.45	
DRO >C10-C28	9140	50.0	07/09/2015	ND	207	104	200	7.40	
Surrogate: 1-Chlorooctane	93.3	% 47.2-15	7						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



		Chevron - NICK MOS HCR 60 Bo Lovington	CHETTI		
		Fax To:	None		
Received:	07/06/2015			Sampling Date:	07/06/2015
Reported:	07/13/2015			Sampling Type:	Soil
Project Name:	SOIL SAMPLES			Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN			Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN				

Sample ID: STATE A-10 2 (H501713-02)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	07/13/2015	ND	2.13	107	2.00	3.67	
Toluene*	<0.200	0.200	07/13/2015	ND	1.90	95.2	2.00	3.76	
Ethylbenzene*	1.02	0.200	07/13/2015	ND	1.82	91.1	2.00	4.21	
Total Xylenes*	4.07	0.600	07/13/2015	ND	5.38	89.6	6.00	4.75	
Total BTEX	5.09	1.20	07/13/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 9	% 61-154	1						
Chloride, SM4500Cl-B mg/kg		kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	07/09/2015	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	538	50.0	07/09/2015	ND	199	99.4	200	6.45	
DRO >C10-C28	10800	50.0	07/09/2015	ND	207	104	200	7.40	
Surrogate: 1-Chlorooctane	163 9	47.2-15	7						
Surrogate: 1-Chlorooctadecane	161 9	6 52.1-17	4						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		Chevron - NICK MOS HCR 60 Bo Lovington	CHETTI		
		Fax To:	None		
Received:	07/06/2015			Sampling Date:	07/06/2015
Reported:	07/13/2015			Sampling Type:	Soil
Project Name:	SOIL SAMPLES			Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN			Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN				

Sample ID: STATE A-10 3 (H501713-03)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	07/13/2015	ND	2.13	107	2.00	3.67	
Toluene*	<0.100	0.100	07/13/2015	ND	1.90	95.2	2.00	3.76	
Ethylbenzene*	0.103	0.100	07/13/2015	ND	1.82	91.1	2.00	4.21	
Total Xylenes*	0.929	0.300	07/13/2015	ND	5.38	89.6	6.00	4.75	
Total BTEX	1.03	0.600	07/13/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 9	61-154	!						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	07/09/2015	ND	416	104	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	167	50.0	07/09/2015	ND	199	99.4	200	6.45	
DRO >C10-C28	6550	50.0	07/09/2015	ND	207	104	200	7.40	
Surrogate: 1-Chlorooctane	119 9	47.2-15	7						
Surrogate: 1-Chlorooctadecane	147 9	% 52.1-17	6						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		Chevron - NICK MOS HCR 60 Bo Lovington	CHETTI		
		Fax To:	None		
Received:	07/06/2015			Sampling Date:	07/06/2015
Reported:	07/13/2015			Sampling Type:	Soil
Project Name:	SOIL SAMPLES			Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN			Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN				

Sample ID: STATE A-10 4 (H501713-04)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/13/2015	ND	2.13	107	2.00	3.67	
Toluene*	<0.050	0.050	07/13/2015	ND	1.90	95.2	2.00	3.76	
Ethylbenzene*	<0.050	0.050	07/13/2015	ND	1.82	91.1	2.00	4.21	
Total Xylenes*	<0.150	0.150	07/13/2015	ND	5.38	89.6	6.00	4.75	
Total BTEX	<0.300	0.300	07/13/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 %	61-154	!						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	07/09/2015	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	07/09/2015	ND	199	99.4	200	6.45	
DRO >C10-C28	4190	50.0	07/09/2015	ND	207	104	200	7.40	
Surrogate: 1-Chlorooctane	89.9 9	47.2-15	7						
Surrogate: 1-Chlorooctadecane	145 %	6 52.1-17	6						

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*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
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 SM4500CI-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

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any daim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatscever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including whose shall be instrumed by client, its subsidiaries, affiliates or successor arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

	(575) 393-2326 FAX (575) 393-2476	575) 393-24	76					
Company Name:	»: Chevron			BILL TO			ANALYSIS REQUEST	
Project Manager:		on		P.O. #:				
Address: 56	56 Texas Camp Road			Company: Chevron	PN N			
city: Lowing for	ten 1	State: NH	NM Zip: 88260	Attn: Nick Moschelli	chetti			
Phone #: 98	985-502-2342	Fax #:		Address: 56 Texes Comp Rd.	Camp Rd.			
Project #:	1.0	Project Owner:	SIL .	city: Lovington,	围			
Project Name:				State: NM Zip: 88 260	8260			_
Project Location:	R			Phone #: 575-396-4414	P-HIH-9			_
Sampler Name:				Fax #:				
FOR LAB USE ONLY				PRESERV. SAMPLING	LING			
Lab I.D. H501713	Sample I.D.		(G)RAB OR (C)OM # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL	SLUDGE OTHER : ACID/BASE: IGE / COOL OTHER : DATE	TIME	TPH Benzene Chlonide		
1	State A-10	1	1 1	<	~ 1:200m ~	1 1 1		
2	State A-10	2			-	-		
ω	~	S						
-		4			-	-		
PLEASE NOTE: Liability a analyses, All claims includ	PLEASE NOTE: Liability and Damager. Cardinal's lability and client's exclusive remedy for any claim arking whether based in contract or tort, shall be limited to the amount paid by the client be dent for the applicable analyzer. All claims including those for molignmee and any other cause whatsoever shall be deemid valved unless made in writing and received by Candinal within 30 days after completion of the applicable	s exclusive remedy fo se whatsoever shaf b	any claim arlang whether based in cont e deemid valved unless made in writing	and received by Candinal within 30 days a	paid by the client for the	skable		
Relinquished By: NiCK Ho Relinquished By: Mail 24	ampton	Date: Γ T/6/iS Time: 3:52 pm Date: Time: Time:	Received By:	lenson_	Phone Result: Fax Result: REMARKS:	: □ Yes □ No □ Yes □ No	Add'l Phone #: Add'l Fax #:	
Delivered By Sampler - UPS	Delivered By: (Circle One) Sampler - UPS - Bus - Other:	2	2.40 Sample Condition Cool Intact Pres Pres	No CHECKED BY:				

t Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-0226

Analytical Report 532368

for ARCADIS

Project Manager: Arti Patel

Chevron Sites

713.953.4841

21-JUL-16

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400) Xenco-San Antonio: Texas (T104704534) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



21-JUL-16

FRORMTORI

Project Manager: **Arti Patel ARCADIS** 1004 N. Big Spring St. Midland, TX 79701

Reference: XENCO Report No(s): **532368** Chevron Sites Project Address: Hobbs, NM

Arti Patel:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 532368. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 532368 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Huns Hoah

Kelsey Brooks Project Manager

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Sample Cross Reference 532368



ARCADIS, Midland, TX

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
STATEA-10-04 4'	S	06-24-16 00:00	- 4 ft	532368-001
STATEA-10-04 10'	S	06-24-16 00:00	- 10 ft	532368-002
STATEA-10-04 20'	S	06-24-16 00:00	- 20 ft	532368-003
STATEA-10-04 30'	S	06-24-16 00:00	- 30 ft	532368-004
STATEA-10-03 4'	S	06-24-16 00:00	- 4 ft	532368-005
STATEA-10-03 10'	S	06-24-16 00:00	- 10 ft	532368-006
STATEA-10-03 20'	S	06-24-16 00:00	- 20 ft	532368-007
STATEA-10-03 30'	S	06-24-16 00:00	- 30 ft	532368-008
STATEA-10-01 4'	S	06-24-16 00:00	- 4 ft	532368-009
STATEA-10-01 10'	S	06-24-16 00:00	- 10 ft	532368-010
STATEA-10-01 20'	S	06-24-16 00:00	- 20 ft	532368-011
STATEA-10-01 30'	S	06-24-16 00:00	- 30 ft	532368-012
STATEA-10-02 4'	S	06-24-16 00:00	- 4 ft	532368-013
STATEA-10-02 10'	S	06-24-16 00:00	- 10 ft	532368-014
STATEA-10-02 20'	S	06-24-16 00:00	- 20 ft	532368-015
STATEA-10-02 30'	S	06-24-16 00:00	- 30 ft	532368-016
STATEA-10-02 50'	S	06-24-16 00:00	- 50 ft	532368-018
STATEA-10-02 70'	S	06-24-16 00:00	- 70 ft	532368-020
STATEA-10-05 4'	S	06-24-16 00:00	- 4 ft	532368-021
STATEA-10-05 10'	S	06-24-16 00:00	- 10 ft	532368-022
STATEA-10-05 20'	S	06-24-16 00:00	- 20 ft	532368-023
STATEA-10-05 30'	S	06-24-16 00:00	- 30 ft	532368-024
VGWUSAT3-02 4'	S	06-24-16 00:00	- 4 ft	532368-025
VGWUSAT3-02 10'	S	06-24-16 00:00	- 10 ft	532368-026
VGWUSAT3-02 20'	S	06-24-16 00:00	- 20 ft	532368-027
VGWUSAT3-02 30'	S	06-24-16 00:00	- 30 ft	532368-028
VGWUSAT3-02 60'	S	06-24-16 00:00	- 60 ft	532368-031
VGWUSAT3-04 4'	S	06-24-16 00:00	- 4 ft	532368-032
VGWUSAT3-04 30'	S	06-24-16 00:00	- 30 ft	532368-035
VGWUSAT3-01 4'	S	06-24-16 00:00	- 4 ft	532368-036
VGWUSAT3-01 10'	S	06-24-16 00:00	- 10 ft	532368-037
STATEA-10-02 40'	S	06-24-16 00:00	- 40 ft	Not Analyzed
STATEA-10-02 60'	S	06-24-16 00:00	- 60 ft	Not Analyzed
VGWUSAT3-02 40'	S	06-24-16 00:00	- 40 ft	Not Analyzed
VGWUSAT3-02 50'	S	06-24-16 00:00	- 50 ft	Not Analyzed
VGWUSAT3-04 10'	S	06-24-16 00:00	- 10 ft	Not Analyzed
VGWUSAT3-04 20'	S	06-24-16 00:00	- 20 ft	Not Analyzed
VGWUSAT3-01 20'	S	06-24-16 00:00	- 20 ft	Not Analyzed
VGWUSAT3-01 30'	S	06-24-16 00:00	- 30 ft	Not Analyzed



CASE NARRATIVE

Client Name: ARCADIS Project Name: Chevron Sites

 Project ID:
 713.953.4841

 Work Order Number(s):
 532368

Report Date: 21-JUL-16 Date Received: 06/25/2016

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-997612 Inorganic Anions by EPA 300/300.1

Lab Sample ID 532437-015 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 532368-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -021.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.







Sample Id : STATEA-10-04 4' Lab Sample Id : 532368-001 Sample Depth : 4 ft		Soil ollected : 06.24.16 oceived : 06.25.16		% Moisture Basis :	5.73 Dry Weigh	nt
Analytical Method : Inorganic Anions Seq Number 997612	by EPA 300/300.1			Prep Method Date Prep:	E300P 07.06.16	12.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	131	mg/kg	07.06.16 19.22		1
Sample Id : STATEA-10-04 4'	Matrix :	Soil		% Moisture	:	
Lab Sample Id : 532368-001 Sample Depth : 4 ft		ollected : 06.24.16 ceived : 06.25.16		Basis :	Wet Weigl	ht
Analytical Method : Soil pH by EPA 9Seq Number997530	045C					
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
рН	12408-02-5	8.12	SU	07.05.16 11.48		1
Sample Id : STATEA-10-04 10'	Matrix :	Soil		% Moisture	: 16.89	
Lab Sample Id : 532368-002	Date Co	ollected : 06.24.16	5 00.00	Basis :	Dry Weigł	nt
Sample Depth : 10 ft	Date Re	ceived : 06.25.16	5 10.30			
Analytical Method : Inorganic Anions	by EPA 300/300.1			Prep Method	: E300P	
Seq Number 997612				Date Prep:	07.06.16	12.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	73.7	mg/kg	07.06.16 19.30		1
Sample Id : STATEA-10-04 10'	Matrix :	Soil		% Moisture	:	
Lab Sample Id : 532368-002		ollected : 06.24.16	5 00.00	Basis :	Wet Weigl	ht
Sample Depth : 10 ft	Date Re	ceived : 06.25.16	5 10.30		-	
Analytical Method : Soil pH by EPA 9	045C					
Seq Number 997530						
	Cas Number	Result	Units	Analysis Date	Flag	Dil





Sample Id : STATEA-10-04 20' Lab Sample Id : 532368-003 Sample Depth : 20 ft		Soil 5000000000000000000000000000000000000		% Moisture Basis :	: .84 Dry Weigh	nt
Analytical Method : TPH By SW8015			0 10.50	Prep Method	l: TX1005P	,
Seq Number 997171				Date Prep:	06.28.16	
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons Total TPH	C6C10GRO PHC635	16.0 16.0	mg/kg mg/kg	06.28.16 22.35 06.28.16 22.35		1 1
Sample Id : STATEA-10-04 20'	Matrix	: Soil		% Moisture	:	
Lab Sample Id : 532368-003	Date Co	ollected : 06.24.1	6 00.00	Basis :	Wet Weig	ht
Sample Depth : 20 ft	Date Re	eceived : 06.25.1	5 10.30			
Analytical Method : Soil pH by EPA 9 Seq Number 997530	045C					
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	8.99	SU	07.05.16 11.48		1
Sample Id : STATEA-10-04 30'	Matrix	: Soil		% Moisture	:	
Lab Sample Id : 532368-004	Date Co	ollected : 06.24.1	6 00.00	Basis :	Wet Weig	ht
Sample Depth : 30 ft	Date Re	eceived : 06.25.1	6 10.30			
Analytical Method : Soil pH by EPA 9 Seq Number 997530	045C					
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
рН	12408-02-5	8.83	SU	07.05.16 11.48		1
Sample Id : STATEA-10-03 4 '	Matrix	: Soil		% Moisture	: 3.94	
Lab Sample Id : 532368-005	Date Co	ollected : 06.24.1	6 00.00	Basis :	Dry Weigh	nt
Sample Depth : 4 ft	Date Re	eceived : 06.25.1	5 10.30			
Analytical Method : Inorganic Anions	by EPA 300/300.1			Prep Method		
Seq Number 997612				Date Prep:	07.06.16	12.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	94.3	mg/kg	07.06.16 20.09		1





Sample Id : STATEA-10-03 4'	Matrix	bon		% Moisture		
Lab Sample Id : 532368-005		ollected : 06.24.10		Basis :	Wet Weig	ht
Sample Depth : 4 ft	Date Re	eceived : 06.25.1	5 10.30			
Analytical Method : Soil pH by EPA 9 Seq Number 997530	045C					
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
pH	12408-02-5	8.63	SU	07.05.16 11.48		1
Sample Id : STATEA-10-03 10'	Matrix	Soil		% Moisture	: 6.18	
Lab Sample Id : 532368-006	Date Co	ollected : 06.24.10	6 00.00	Basis :	Dry Weig	ht
Sample Depth : 10 ft	Date Re	ceived : 06.25.1	6 10.30			
Analytical Method : Inorganic Anions	by EPA 300/300.1			Prep Method	1: E300P	
Seq Number 997612	-			Date Prep:	07.06.16	12.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	45.9	mg/kg	07.06.16 20.17		1
Sample Id : STATEA-10-03 10'	Matrix			% Moisture		
Sample Id : STATEA-10-03 10' Lab Sample Id : 532368-006		Soil Soil Soil	5 00 00	Basis :	Wet Weig	ht
Sample Depth : 10 ft		ceived : 06.25.10		Dublo .		
Analytical Method : Soil pH by EPA 9 Seq Number 997530						
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
рН	12408-02-5	8.97	SU	07.05.16 11.48		1
Sample Id : STATEA-10-03 20'	Matrix	5011		% Moisture		
Lab Sample Id : 532368-007		ollected : 06.24.10		Basis :	Dry Weig	ht
Sample Depth : 20 ft	Date Re	eceived : 06.25.1	5 10.30			
Analytical Method : Inorganic Anions	by EPA 300/300.1			Prep Method	1: E300P	
Seq Number 997612				Date Prep:	07.06.16	12.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil





Sample Id : STATEA-10-03 20'	Matrix	Soil		% Moisture	:	
Lab Sample Id : 532368-007	Date Co	ollected : 06.24.1	5 00.00	Basis :	Wet Weigl	ht
Sample Depth : 20 ft	Date Re	eceived : 06.25.10	5 10.30			
Analytical Method : Soil pH by EPA 9 Seq Number 997530	045C					
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
рН	12408-02-5	8.97	SU	07.05.16 11.48		1
Sample Id : STATEA-10-03 30'	Matrix	Soil		% Moisture	:	
Lab Sample Id : 532368-008	Date Co	ollected : 06.24.1	5 00.00	Basis :	Wet Weigl	ht
Sample Depth : 30 ft	Date Re	eceived : 06.25.10	5 10.30			
Analytical Method : Soil pH by EPA 9 Seq Number 997530	045C					
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
рН	12408-02-5	9.04	SU	07.05.16 11.48		1
Sample Id : STATEA-10-01 4'	Matrix	: Soil		% Moisture	• 4 23	
Lab Sample Id : 532368-009		ollected : 06.24.10	5 00.00	Basis :	Dry Weigh	nt
Sample Depth : 4 ft	Date Re	eceived : 06.25.1	5 10.30			
Analytical Method : Inorganic Anions	by EDA 200/200 1			Duan Matha	L E200D	
Seq Number 997612	by EFA 500/500.1			Prep Method Date Prep:	07.06.16	12.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	441	mg/kg	07.07.16 07.29	1145	1
Sample Id : STATEA-10-01 4'	Matrix	Soil		% Moisture	:	
Lab Sample Id : 532368-009	Date Co	ollected : 06.24.10	5 00.00	Basis :	Wet Weigl	ht
Sample Depth : 4 ft	Date Re	eceived : 06.25.1	5 10.30			
Analytical Method : Soil pH by EPA 9 Seq Number 997530	045C					
D	Cas Number	Result	Units	Analysis Date	Flag	Dil
Parameter	Cas Number	Kesuit	Units	Analysis Date	riag	DII





Sample Id : STATEA-10-01 10'	Matrix :	Soil		% Moisture	:	
Lab Sample Id : 532368-010	Date Co	ollected : 06.24.10	5 00.00	Basis :	Wet Weigl	nt
Sample Depth : 10 ft	Date Re	eceived : 06.25.10	5 10.30			
Analytical Method : Soil pH by EPA 9 Seq Number 997530	045C					
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
рН	12408-02-5	9.08	SU	07.05.16 11.48		1
Sample Id : STATEA-10-01 20'	Matrix :	Soil		% Moisture	:	
Lab Sample Id : 532368-011	Date Co	ollected : 06.24.10	5 00.00	Basis :	Wet Weigl	nt
Sample Depth : 20 ft	Date Re	ceived : 06.25.10	5 10.30			
Analytical Method : Soil pH by EPA 9 Seq Number 997530	045C					
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
рН	12408-02-5	9.11	SU	07.05.16 11.48		1
Sample Id : STATEA-10-01 30'	Matrix :	Soil		% Moisture	:	
Lab Sample Id : 532368-012		ollected : 06.24.10	5 00.00	Basis :	Wet Weigl	nt
Sample Depth : 30 ft	Date Re	ceived : 06.25.16	5 10.30			
Analytical Method : Soil pH by EPA 9 Seq Number 997530	045C					
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
рН	12408-02-5	8.82	SU	07.05.16 11.48		1
Sample Id : STATEA-10-02 4'	Matrix :	Soil		% Moisture	: 9.44	
Lab Sample Id : 532368-013		ollected : 06.24.10	5 00.00	Basis :	Dry Weigh	ıt
Sample Depth : 4 ft		ceived : 06.25.10				
Analytical Method : Inorganic Anions Seq Number 997612	by EPA 300/300.1			Prep Methoo Date Prep:	1: E300P 07.06.16	12.00
				Date riep.	07.00.10	-2.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil





Sample Id : STATEA-10-02 4'	Matrix :	Soil		% Moisture	:	
Lab Sample Id : 532368-013	Date Co	ollected : 06.24.1	6 00.00	Basis :	Wet Weig	ht
Sample Depth : 4 ft	Date Re	ceived : 06.25.1	6 10.30			
Analytical Method : Soil pH by EPA 9 Seq Number 997530	045C					
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
рН	12408-02-5	9.41	SU	07.05.16 11.48		1
Sample Id : STATEA-10-02 10'	Matrix :	Soil		% Moisture	: 9.6	
Lab Sample Id : 532368-014	Date Co	ollected : 06.24.1	6 00.00	Basis :	Dry Weigł	nt
Sample Depth: 10 ft	Date Re	ceived : 06.25.1	5 10.30			
Analytical Method : Inorganic Anions	by EPA 300/300.1			Prep Method	l: E300P	
Seq Number 997612				Date Prep:	07.06.16	12.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	131	mg/kg	07.07.16 08.39		5
Sample Id : STATEA-10-02 10'	Matrix :	Soil		% Moisture		
Lab Sample Id : 532368-014		ollected : 06.24.1	5 00 00	Basis :	Wet Weig	ht
Sample Depth : 10 ft		ceived : 06.25.1				
Analytical Method : Soil pH by EPA 9 Seq Number 997530	045C					
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
рН	12408-02-5	9.69	SU	07.05.16 11.48		1
Sample Id : STATEA-10-02 20'	Matrix :	Soil		% Moisture	: 12.62	
Lab Sample Id : 532368-015	Date Co	ollected : 06.24.1	6 00.00	Basis :	Dry Weigh	nt
Sample Depth : 20 ft	Date Re	ceived : 06.25.1	6 10.30			
Analytical Method : Inorganic Anions	by EPA 300/300.1			Prep Method	1: E300P	
Seq Number 997612				Date Prep:	07.06.16	12.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil





Sample Id : STATEA-10-02 20'	Matrix :	Soil		% Moisture	:				
Lab Sample Id : 532368-015	Date Co	ollected : 06.24.10	6 00.00	Basis :	Wet Weig	ht			
Sample Depth : 20 ft	Date Re	ceived : 06.25.1	6 10.30						
Analytical Method : Soil pH by EPA 9 Seq Number 997530	045C								
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil			
рН	12408-02-5	9.60	SU	07.05.16 11.48		1			
Sample Id : STATEA-10-02 30'	Matrix :	Soil		% Moisture	: 5.72				
Lab Sample Id : 532368-016	Date Co	ollected : 06.24.10	6 00.00	Basis :	Dry Weigl	nt			
Sample Depth : 30 ft	Date Re	ceived : 06.25.1	5 10.30						
Analytical Method : Inorganic Anions	by EPA 300/300.1			Prep Method: E300P					
Seq Number 997612				Date Prep:	07.06.16	12.00			
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil			
Chloride	16887-00-6	418	mg/kg	07.07.16 08.55		5			
Sample Id : STATEA-10-02 30' Lab Sample Id : 532368-016	Matrix :	Soil Ilected : 06.24.10	< 00 00	% Moisture Basis :	: Wet Weig	h+			
Sample Depth : 30 ft		ceived : $06.24.10$		Dasis .	wei weig	m			
Analytical Method : Soil pH by EPA 9 Seq Number 997530									
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil			
pH	12408-02-5	9.68	SU	07.05.16 11.48		1			
Sample Id : STATEA-10-02 50'	Matrix :	Soil		% Moisture	:				
Lab Sample Id : 532368-018		ollected : 06.24.10	6 00.00	Basis :	Wet Weig	ht			
Sample Depth : 50 ft		ceived : 06.25.1			0				
Analytical Method : Inorganic Anions	by EPA 300/300.1			Prep Method	1: E300P				
Seq Number 998310				Date Prep:	07.18.16	14.00			
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil			
Chloride	16887-00-6	1630	mg/kg	07.18.16 20.11		10			





Sample Id : STATEA-10-02 70' Lab Sample Id : 532368-020 Sample Depth : 70 ft		Soil llected : 06.24.16 ceived : 06.25.16		% Moisture Basis :	: 6.09 Dry Weigh	t	
Analytical Method : Inorganic Anions Seq Number 998464	by EPA 300/300.1			Prep Methoo Date Prep:	1: E300P 07.20.16 1	2.00	
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil	
Chloride	16887-00-6	865	mg/kg	07.20.16 16.46		5	
Sample Id : STATEA-10-05 4'	Matrix :	Soil		% Moisture	: 3.84		
Lab Sample Id : 532368-021 Sample Depth : 4 ft		llected : 06.24.10 ceived : 06.25.10		Basis :	Dry Weigh	t	
Analytical Method : Inorganic Anions Seq Number 997612	by EPA 300/300.1			Prep Methoo Date Prep:	1: E300P 07.06.16 1	6 12.00	
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil	
Chloride	16887-00-6	47.5	mg/kg	07.07.16 09.02		1	
Sample Id : STATEA-10-05 4'	Matrix :	Soil		% Moisture	:		
Lab Sample Id : 532368-021	Date Co	llected : 06.24.10	6 00.00	Basis :	Wet Weigh	ıt	
Sample Depth : 4 ft	Date Re	ceived : 06.25.10	6 10.30				
Analytical Method : Soil pH by EPA 9 Seq Number 997531	045C						
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil	
рН	12408-02-5	8.92	SU	07.05.16 15.52		1	
Sample Id : STATEA-10-05 10'	Matrix :	Soil		% Moisture	:		
Lab Sample Id : 532368-022		llected : 06.24.10	6 00.00	Basis :	Wet Weigh	ıt	
Sample Depth : 10 ft	Date Re-	ceived : 06.25.10	6 10.30		-		
Analytical Method : Soil pH by EPA 9 Seq Number 997531	045C						
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil	
рН	12408-02-5	9.04	SU	07.05.16 15.52		1	





Sample Id :STATEA-10-05 20'Lab Sample Id : 532368-023Sample Depth :20 ft		Soil Sollected : 06.24.10 Seceived : 06.25.10		% Moisture Basis :	: 1.61 Dry Weigh	ıt
Analytical Method : Inorganic Anions Seq Number 997641	by EPA 300/300.1			Prep Method Date Prep:	l: E300P 07.06.16	14.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.2	mg/kg	07.07.16 10.21		1
Sample Id : STATEA-10-05 20'	Matrix	Soil		% Moisture	:	
Lab Sample Id : 532368-023 Sample Depth : 20 ft		ollected : 06.24.10 eceived : 06.25.10		Basis :	Wet Weigl	nt
Analytical Method : Soil pH by EPA 9 Seq Number 997531	045C					
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
рН	12408-02-5	9.27	SU	07.05.16 15.52		1
Sample Id : STATEA-10-05 30'	Matrix	Soil		% Moisture	: 8.11	
Lab Sample Id : 532368-024	Date Co	ollected : 06.24.10	6 00.00	Basis :	Dry Weigh	ıt
Sample Depth : 30 ft	Date Re	ceived : 06.25.1	5 10.30			
Analytical Method : Inorganic Anions	by EPA 300/300 1			Prep Method	ŀ F300P	
Seq Number 997641				Date Prep:	07.06.16	14.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.4	mg/kg	07.07.16 10.28		1
Sample Id : STATEA-10-05 30'	Matrix	Soil		% Moisture	:	
Lab Sample Id : 532368-024		ollected : 06.24.10	6 00.00	Basis :	Wet Weigl	nt
Sample Depth : 30 ft		ceived : 06.25.1			U	
Analytical Method : Soil pH by EPA 9 Seq Number 997531	045C					
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
					5	





Sample Id : VGWUSAT3-02 4'	Matrix :	Soil		% Moisture	: 0	
Lab Sample Id : 532368-025	Date Col	lected : 06.24.16	5 00.00	Basis :	Dry Weigh	nt
Sample Depth : 4 ft	Date Rec	eived : 06.25.16	5 10.30			
Analytical Method : Inorganic Anions I	by EPA 300/300.1			Prep Method	l: E300P	
Seq Number 998464				Date Prep:	07.20.16	12.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3340	mg/kg	07.20.16 17.09		20
Sample Id : VGWUSAT3-02 10'	Matrix :	Soil		% Moisture :	: 0	
Lab Sample Id : 532368-026	Date Col	lected : 06.24.16	5 00.00	Basis :	Dry Weigh	nt
Sample Depth : 10 ft	Date Rec	eived : 06.25.16	5 10.30			
Analytical Method : Inorganic Anions l	by EPA 300/300.1			Prep Method	l: E300P	
Seq Number 998464				Date Prep:	07.20.16	12.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3590	mg/kg	07.20.16 17.17		20
1 ab Sampla Id : 520260 007				Desta		
-		lected : 06.24.16 eived : 06.25.16		Basis :	Wet Weig	ht
Sample Depth : 20 ft Analytical Method : Inorganic Anions I	Date Rec			Prep Method	l: E300P	
Sample Depth : 20 ft Analytical Method : Inorganic Anions I	Date Rec			Prep Method Date Prep:	-	
Sample Depth : 20 ft Analytical Method : Inorganic Anions I Seq Number 998310 Parameter	Date Rec by EPA 300/300.1 Cas Number	eived : 06.25.16 Result	5 10.30 Units	Prep Method Date Prep: Analysis Date	l: E300P	14.00 Dil
Sample Depth : 20 ft Analytical Method : Inorganic Anions I Seq Number 998310 Parameter	Date Rec by EPA 300/300.1	eived : 06.25.16	5 10.30	Prep Method Date Prep:	l: E300P 07.18.16	14.00
Sample Depth : 20 ft Analytical Method : Inorganic Anions I Seq Number 998310 Parameter Chloride Sample Id : VGWUSAT3-02 30'	Date Rec by EPA 300/300.1 <u>Cas Number</u> 16887-00-6 Matrix :	eived : 06.25.16 <u>Result</u> 546 Soil	5 10.30 Units mg/kg	Prep Method Date Prep: Analysis Date 07.18.16 20.18 % Moisture :	: E300P 07.18.16 Flag	14.00 Dil 5
Sample Depth : 20 ft Analytical Method : Inorganic Anions I Seq Number 998310 Parameter Chloride Sample Id : VGWUSAT3-02 30' Lab Sample Id : 532368-028	Date Rec by EPA 300/300.1 Cas Number 16887-00-6 Matrix : Date Col	eived : 06.25.16 Result 546 Soil lected : 06.24.16	5 10.30 Units mg/kg 5 00.00	Prep Method Date Prep: Analysis Date 07.18.16 20.18	: E300P 07.18.16 Flag	14.00 Dil 5
Sample Depth : 20 ft Analytical Method : Inorganic Anions I Seq Number 998310 Parameter Chloride Sample Id : VGWUSAT3-02 30' Lab Sample Id : 532368-028	Date Rec by EPA 300/300.1 Cas Number 16887-00-6 Matrix : Date Col	eived : 06.25.16 <u>Result</u> 546 Soil	5 10.30 Units mg/kg 5 00.00	Prep Method Date Prep: Analysis Date 07.18.16 20.18 % Moisture :	: E300P 07.18.16 Flag	14.00 Dil 5
Sample Depth : 20 ft Analytical Method : Inorganic Anions I Seq Number 998310 Parameter Chloride Sample Id : VGWUSAT3-02 30' Lab Sample Id : 532368-028 Sample Depth : 30 ft	Date Rec by EPA 300/300.1 Cas Number 16887-00-6 Matrix : Date Col Date Rec	eived : 06.25.16 Result 546 Soil lected : 06.24.16	5 10.30 Units mg/kg 5 00.00	Prep Method Date Prep: Analysis Date 07.18.16 20.18 % Moisture :	: E300P 07.18.16 Flag Wet Weig	14.00 Dil 5
Sample Depth : 20 ft Analytical Method : Inorganic Anions I Seq Number 998310 Parameter Chloride Sample Id : VGWUSAT3-02 30' Lab Sample Id : 532368-028 Sample Depth : 30 ft Analytical Method : Inorganic Anions I	Date Rec by EPA 300/300.1 Cas Number 16887-00-6 Matrix : Date Col Date Rec	eived : 06.25.16 Result 546 Soil lected : 06.24.16	5 10.30 Units mg/kg 5 00.00	Prep Method Date Prep: Analysis Date 07.18.16 20.18 % Moisture : Basis :	: E300P 07.18.16 Flag Wet Weig	14.00 Dil 5
Parameter Chloride Sample Id : VGWUSAT3-02 30' Lab Sample Id : 532368-028 Sample Depth : 30 ft Analytical Method : Inorganic Anions I	Date Rec by EPA 300/300.1 Cas Number 16887-00-6 Matrix : Date Col Date Rec	eived : 06.25.16 Result 546 Soil lected : 06.24.16	5 10.30 Units mg/kg 5 00.00	Prep Method Date Prep: Analysis Date 07.18.16 20.18 % Moisture : Basis : Prep Method	: E300P 07.18.16 Flag : Wet Weig : E300P	14.00 Dil 5





Sample Id :VGWUSAT3-02 60'Lab Sample Id :532368-031Sample Depth :60 ft		Soil lected : 06.24.16 ceived : 06.25.16		% Moisture : Basis :	7.45 Dry Weigl	nt
Analytical Method : Inorganic AnionsSeq Number997641	by EPA 300/300.1			Prep Method Date Prep:	: E300P 07.06.16	14.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.9	mg/kg	07.07.16 10.36		1
Sample Id : VGWUSAT3-04 4'	Matrix :	Soil		% Moisture :		
Lab Sample Id : 532368-032 Sample Depth : 4 ft		lected : 06.24.10 ceived : 06.25.10		Basis :	Wet Weig	ht
Analytical Method : Inorganic Anions Seq Number 998310	by EPA 300/300.1			Prep Method Date Prep:	: E300P 07.18.16	14.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	58.4	mg/kg	07.18.16 20.34		1
Sample Id : VGWUSAT3-04 30'	Matrix :	Soil		% Moisture :	: 7.45	
Lab Sample Id : 532368-035 Sample Depth : 30 ft		lected : 06.24.10 ceived : 06.25.10		Basis :	Dry Weigh	nt
Analytical Method : Inorganic Anions	by EPA 300/300.1			Prep Method		
Seq Number 997641				Date Prep:	07.06.16	14.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	72.2	mg/kg	07.07.16 10.44		1
Sample Id : VGWUSAT3-01 4'	Matrix :	Soil		% Moisture	:	
Lab Sample Id : 532368-036		lected : 06.24.10		Basis :	Wet Weig	ht
Sample Depth : 4 ft	Date Rec	ceived : 06.25.10	5 10.30			
Analytical Method : Inorganic Anions Seq Number 998310	by EPA 300/300.1			Prep Method Date Prep:	: E300P 07.18.16	14.00
		D	T T •/	-		
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	681	mg/kg	07.18.16 20.42		5





Sample Id : VGWUSAT3-01 10	Matrix	Soil		% Moisture	: 7.45	
Lab Sample Id : 532368-037	Date Co	ollected : 06.24.16	5 00.00	Basis :	Dry Weigh	nt
Sample Depth : 10 ft	Date Re	eceived : 06.25.16	5 10.30			
Analytical Method : Inorganic Anions Seq Number 997641	by EPA 300/300.1			Prep Method Date Prep:	1: E300P 07.06.16	14.00
Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	54.4	mg/kg	07.07.16 11.07		1



Certificate of Analysis Summary 532368

ARCADIS, Midland, TX Project Name: Chevron Sites



Date Received in Lab:Sat Jun-25-16 10:30 amReport Date:21-JUL-16Project Manager:Kelsey Brooks

	Lab Id:	532368-0	01	532368-0	02	532368-0	03	532368-0	04	532368-0	05	532368-0	06
Analysis Requested	Field Id:	STATEA-10	-04 4'	STATEA-10-	04 10'	STATEA-10-0	04 20'	STATEA-10-0	04 30'	STATEA-10	-03 4'	STATEA-10-	03 10'
Analysis Kequestea	Depth:	4 ft	4 ft		10 ft		20 ft			4 ft		10 ft	
	Matrix:	SOIL	SOIL			SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-16 0	0:00	Jun-24-16 0	0:00	Jun-24-16 00:00		Jun-24-16 0	0:00	Jun-24-16 (00:00	Jun-24-16 0	0:00
Percent Moisture	Extracted:												
	Analyzed:	Jul-01-16 1	7:05	Jul-01-16 1	7:05	Jul-01-16 17	7:05	Jul-01-16 1'	7:05	Jul-01-16 1	7:05	Jul-01-16 1	7:05
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		5.73	1.00	16.9	1.00	<1.00	1.00	5.06	1.00	3.94	1.00	6.18	1.00

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Huns Boah

Kelsey Brooks Project Manager



Certificate of Analysis Summary 532368

ARCADIS, Midland, TX Project Name: Chevron Sites



Date Received in Lab:Sat Jun-25-16 10:30 amReport Date:21-JUL-16Project Manager:Kelsey Brooks

								1					
	Lab Id:	532368-0	001	532368-0	02	532368-0	003	532368-0	04	532368-0	05	532368-00	06
Analysis Requested	Field Id:	STATEA-10	-04 4'	STATEA-10-0	04 10'	STATEA-10-	04 20'	STATEA-10-0	04 30'	STATEA-10-	03 4'	STATEA-10-0	03 10'
Anulysis Kequesieu	Depth:	4 ft		10 ft		20 ft		30 ft		4 ft		10 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-16 (00:00	Jun-24-160	0:00	Jun-24-16 0	00:00	Jun-24-16 0	0:00	Jun-24-16 0	00:00	Jun-24-16 0	0:00
Inorganic Anions by EPA 300/300.1	Extracted:	Jul-06-16 1	2:00	Jul-06-16 1	Jul-06-16 12:00		Jul-06-16 12:00		2:00	Jul-06-16 1	2:00	Jul-06-16 12	2:00
	Analyzed:	Jul-06-16 1			9:30	Jul-06-16 1	9:38	Jul-06-16 2	0:01	Jul-06-16 2	0:09	Jul-06-16 20	0:17
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		131	10.6	73.7	12.0	<10.1	10.1	<10.5	10.5	94.3	10.4	45.9	10.7
Soil pH by EPA 9045C	Extracted:												
	Analyzed:	Jul-05-16 1	1:48	Jul-05-16 1	1:48	Jul-05-16 11:48		Jul-05-16 1	1:48	Jul-05-16 1	1:48	Jul-05-16 1	1:48
	Units/RL:	SU	RL	SU	RL	SU	RL	SU	RL	SU	RL	SU	RL
pH		8.12		8.46		8.99		8.83		8.63		8.97	
TPH By SW8015B Mod	Extracted:	Jun-28-16	15:00	Jun-28-16 1	5:00	Jun-28-16 1	5:00	Jun-28-16 15:00		Jun-28-16 15:00		Jun-28-16 1	5:00
	Analyzed:	Jun-28-16 2	20:53	Jun-28-16 2	2:10	Jun-28-16 2	2:35	Jun-28-16 2	3:01	Jun-28-16 2	3:27	Jun-28-16 2	3:55
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons		<15.9	15.9	<18.0	18.0	16.0	15.1	<15.8	15.8	<15.6	15.6	<16.0	16.0
C10-C28 Diesel Range Hydrocarbons		<15.9	15.9	<18.0	18.0	<15.1	15.1	<15.8	15.8	<15.6	15.6	<16.0	16.0
Total TPH		<15.9	15.9	<18.0	18.0	16.0	15.1	<15.8	15.8	<15.6	15.6	<16.0	16.0

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Kelsey Brooks Project Manager



Certificate of Analysis Summary 532368

ARCADIS, Midland, TX Project Name: Chevron Sites



Date Received in Lab:Sat Jun-25-16 10:30 amReport Date:21-JUL-16Project Manager:Kelsey Brooks

	Lab Id:	532368-0	07	532368-0	08	532368-0	09	532368-0	10	532368-0	011	532368-0	12
Analysis Requested	Field Id:	STATEA-10-0	03 20'	STATEA-10-	03 30'	STATEA-10	-01 4'	STATEA-10-0	01 10'	STATEA-10-	01 20'	STATEA-10-	01 30'
Analysis Kequesiea	Depth:	20 ft			30 ft		4 ft			20 ft		30 ft	
	Matrix:	SOIL	SOIL			SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-16 0	0:00	Jun-24-16 0	0:00	Jun-24-16 00:00		Jun-24-16 0	0:00	Jun-24-16 (00:00	Jun-24-16 0	0:00
Percent Moisture	Extracted:												
	Analyzed:	Jul-01-16 1	7:05	Jul-01-16 1	7:05	Jul-01-16 1	7:05	Jul-01-16 17	7:05	Jul-01-16 1	7:05	Jul-01-16 1	7:05
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		9.16	1.00	6.29	1.00	4.23	1.00	2.90	1.00	3.89	1.00	6.76	1.00

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Kelsey Brooks Project Manager



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Date Received in Lab:Sat Jun-25-16 10:30 amReport Date:21-JUL-16Project Manager:Kelsey Brooks

Lab Id:	532368-0	07	532368-0	08	532368-0	09	532368-0	10	532368-0	11	532368-01	12
Field Id:	STATEA-10-0	03 20'	STATEA-10-0	03 30'	STATEA-10-	-01 4'	STATEA-10-0	01 10'	STATEA-10-0	01 20'	STATEA-10-0	01 30'
Depth:	20 ft		30 ft		4 ft		10 ft		20 ft		30 ft	
Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
Sampled:	Jun-24-16 0	00:00	Jun-24-16 0	0:00	Jun-24-16 0	00:00	Jun-24-16 0	0:00	Jun-24-16 0	0:00	Jun-24-16 0	0:00
Extracted:	Jul-06-16 1	2:00	Jul-06-16 12	Jul-06-16 12:00		Jul-06-16 12:00		2:00	Jul-06-16 1	2:00	Jul-06-16 12	2:00
Analyzed:	Jul-06-16 2			0:32	Jul-07-16 0	7:29	Jul-07-16 0	7:52	Jul-07-16 0	8:00	Jul-07-16 08	3:23
Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
	29.5			10.7	441	10.4	<10.3	10.3	<10.4	10.4	<10.7	10.7
Extracted:												
Analyzed:	Jul-05-16 1	1:48	Jul-05-16 1	1:48	Jul-05-16 11:48		Jul-05-16 1	1:48	Jul-05-16 1	1:48	Jul-05-16 11	1:48
Units/RL:	SU	RL	SU	RL	SU	RL	SU	RL	SU	RL	SU	RL
	8.97		9.04		8.22		9.08		9.11		8.82	
Extracted:	Jun-28-16 1	5:00	Jun-28-16 1	5:00	Jun-28-16 1	5:00	Jun-28-16 15:00		Jun-28-16 15:00		Jun-28-16 1	5:00
Analyzed:	Jun-29-16 (00:21	Jun-29-16 0	0:48	Jun-29-16 0	01:16	Jun-29-16 0	1:42	Jun-29-16 0	2:35	Jun-29-16 02	2:59
Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
	<16.5	16.5	<16.0	16.0	<15.6	15.6	<15.4	15.4	<15.6	15.6	<16.1	16.1
	<16.5	16.5	<16.0	16.0	<15.6	15.6	<15.4	15.4	<15.6	15.6	<16.1	16.1
	<16.5	16.5	<16.0	16.0	<15.6	15.6	<15.4	15.4	<15.6	15.6	<16.1	16.1
	Field Id: Depth: Matrix: Sampled: Extracted: Analyzed: Units/RL: Extracted: Analyzed: Extracted: Analyzed:	Field Id: STATEA-10-4 Depth: 20 ft Matrix: SOIL Sampled: Jun-24-16 0 Extracted: Jun-24-16 0 Matrix: SOIL Sampled: Jun-24-16 0 Extracted: Jul-06-16 1 Malyzed: Jul-06-16 2 Units/RL: mg/kg Extracted: Jul-05-16 1 Units/RL: SU Extracted: Jun-28-16 1 Analyzed: Jun-28-16 1 Analyzed: Jun-28-16 1 Analyzed: Jun-28-16 1 Matyzed: Jun-28-16 1 Malyzed: Jun-28-16 1 Analyzed: Jun-28-16 0 Units/RL: mg/kg Contis/RL: mg/kg	Field Id: STATEA-10-03 20' Depth: 20 ft Matrix: SOIL Sampled: Jun-24-16 00:00 Extracted: Jul-06-16 12:00 Analyzed: Jul-06-16 20:25 Units/RL: mg/kg RL Analyzed: Jul-05-16 11:48 Units/RL: SU RL Sun 8.97 RL Extracted: Jun-28-16 15:00 Analyzed: Jun-28-16 15:00 Analyzed: Jun-29-16 00:21 Units/RL: mg/kg RL Sun-29-16 00:21 Jun-29-16 00:21 SU Units/RL: mg/kg RL <16.5 16.5	Field Id: STATEA-10-03 20' STATEA-10-04 Depth: 20 ft 30 ft Matrix: SOIL SOIL Sampled: Jun-24-16 00:00 Jun-24-16 0 Extracted: Jul-06-16 12:00 Jul-06-16 12 Analyzed: Jul-06-16 20:25 Jul-06-16 20 Units/RL: mg/kg RL mg/kg Extracted: Jul-05-16 11:48 Jul-05-16 11 Analyzed: Jul-05-16 11:48 Jul-05-16 1 Units/RL: SU RL SU Extracted: Jun-28-16 15:00 Jun-28-16 15 Units/RL: Jun-28-16 15:00 Jun-28-16 16 Manalyzed: Jun-29-16 00:21 Jun-29-16 00 Units/RL: mg/kg RL mg/kg Manalyzed: Jun-29-16 00:21 Jun-29-16 00 Units/RL: mg/kg RL mg/kg Manalyzed: Jun-29-16 00:21 Jun-29-16 00 Manalyzed: Jun-29-16 00:21 Jun-29-16 00 Manalyzed: Jun-29-16 00:21 Jun-29-16 00 Manalyzed: Jun-29-16 00:21 Jun-29-16 00	Field Id: STATEA-10-03 20' STATEA-10-03 30' Depth: 20 ft 30 ft Matrix: SOIL SOIL Sampled: Jun-24-16 00:00 Jun-24-16 00:00 Extracted: Jul-06-16 12:00 Jul-06-16 12:00 Analyzed: Jul-06-16 20:25 Jul-06-16 20:32 Units/RL: mg/kg RL mg/kg RL Analyzed: Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Units/RL: SU RL SU RL Analyzed: Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Units/RL: SU RL SU RL Analyzed: Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Units/RL: SU RL SU RL Basy 9.04 RL SU RL Linits/RL: Jun-28-16 15:00 Jun-28-16 15:00 Jun-28-16 0:248 Mailyzed: Jun-29-16 00:21 Jun-29-16 00:48 Mill Units/RL: mg/kg RL mg/kg RL Mailyzed: Jun-29-16 00:21 <th>Field Id: STATEA-10-03 20' STATEA-10-03 30' STATEA-10-0 Depth: 20 ft 30 ft 4 ft Matrix: SOIL SOIL SOIL Sampled: Jun-24-16 00:00 Jun-24-16 00:00 Jun-24-16 00:00 Jun-24-16 00:00 Extracted: Jul-06-16 12:00 Jul-06-16 12:00 Jul-06-16 12:00 Jul-06-16 10:00 Jul-06-16 10:00 Units/RL: mg/kg RL mg/kg RL mg/kg RL mg/kg Analyzed: Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Analyzed: Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Ktracted: SU RL SU RL SU RL SU Analyzed: Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Chris/RL: SU RL SU RL SU RL SU Manalyzed: Jun-28-16 15:00 Jun-28-16 15:00 Jun-28-16 15:00 Jun-28-16 15:00 Jun-28-16 15:00 Jun-28-</th> <th>Field Id: STATEA-10-03 20' STATEA-10-03 30' STATEA-10-01 4' Depth: 20 ft 30 ft 4 ft Matrix: SOIL SOIL SOIL Sampled: Jun-24-16 00:00 Jun-24-16 00:00 Jun-24-16 00:00 Jun-24-16 00:00 Extracted: Jul-06-16 12:00 Jul-06-16 12:00 Jul-06-16 12:00 Jul-06-16 12:00 Analyzed: Jul-06-16 20:25 Jul-06-16 20:32 Jul-07-16 07:29 Units/RL: mg/kg RL mg/kg RL mg/kg RL Analyzed: Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Units/RL: SU RL SU RL SU RL Matrix: SU RL SU RL SU RL Analyzed: Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Units/RL: SU RL SU RL SU RL Analyzed: Jun-28-16 15:00 Jun-28-16 15:00 Jun-28-16 15:00</th> <th>Field Id: STATEA-10-03 20' STATEA-10-03 30' STATEA-10-01 4' STA</th> <th>Field Id: STATEA-10-03 20' STATEA-10-03 30' STATEA-10-01 4' STATEA-10-01 10' Depth: 20 ft 30 ft 4 ft 10 ft Matrix: SOIL SOIL SOIL SOIL Jun-24-16 0:00 Jun-24-16 0:00<!--</th--><th>Field Id: STATEA-10-03 30' STATEA-10-01 4' STATEA-10-11 4' STATEA-10-01 4'' STATEA-10-01 4'' STATEA-10-01 4'' STATEA-10-01 4'' STATEA-10-01 4''' STATEA-10-01 4''''''''''''''''''''''''''''''''''''</th><th>Field Id: STATEA-10-03 JV STATEA-10-03 JV STATEA-10-01 JV STATE</th><th>Field Id: STATEA-10-03 30' STATEA-10-01 4' STATEA-10-11' STATEA-10-11'' STATEA-10-11''' STATEA-10-11'''' STATEA-10-11'''''''''''''''''''''''''''''''''</th></th>	Field Id: STATEA-10-03 20' STATEA-10-03 30' STATEA-10-0 Depth: 20 ft 30 ft 4 ft Matrix: SOIL SOIL SOIL Sampled: Jun-24-16 00:00 Jun-24-16 00:00 Jun-24-16 00:00 Jun-24-16 00:00 Extracted: Jul-06-16 12:00 Jul-06-16 12:00 Jul-06-16 12:00 Jul-06-16 10:00 Jul-06-16 10:00 Units/RL: mg/kg RL mg/kg RL mg/kg RL mg/kg Analyzed: Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Analyzed: Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Ktracted: SU RL SU RL SU RL SU Analyzed: Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Chris/RL: SU RL SU RL SU RL SU Manalyzed: Jun-28-16 15:00 Jun-28-16 15:00 Jun-28-16 15:00 Jun-28-16 15:00 Jun-28-16 15:00 Jun-28-	Field Id: STATEA-10-03 20' STATEA-10-03 30' STATEA-10-01 4' Depth: 20 ft 30 ft 4 ft Matrix: SOIL SOIL SOIL Sampled: Jun-24-16 00:00 Jun-24-16 00:00 Jun-24-16 00:00 Jun-24-16 00:00 Extracted: Jul-06-16 12:00 Jul-06-16 12:00 Jul-06-16 12:00 Jul-06-16 12:00 Analyzed: Jul-06-16 20:25 Jul-06-16 20:32 Jul-07-16 07:29 Units/RL: mg/kg RL mg/kg RL mg/kg RL Analyzed: Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Units/RL: SU RL SU RL SU RL Matrix: SU RL SU RL SU RL Analyzed: Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Jul-05-16 11:48 Units/RL: SU RL SU RL SU RL Analyzed: Jun-28-16 15:00 Jun-28-16 15:00 Jun-28-16 15:00	Field Id: STATEA-10-03 20' STATEA-10-03 30' STATEA-10-01 4' STA	Field Id: STATEA-10-03 20' STATEA-10-03 30' STATEA-10-01 4' STATEA-10-01 10' Depth: 20 ft 30 ft 4 ft 10 ft Matrix: SOIL SOIL SOIL SOIL Jun-24-16 0:00 Jun-24-16 0:00 </th <th>Field Id: STATEA-10-03 30' STATEA-10-01 4' STATEA-10-11 4' STATEA-10-01 4'' STATEA-10-01 4'' STATEA-10-01 4'' STATEA-10-01 4'' STATEA-10-01 4''' STATEA-10-01 4''''''''''''''''''''''''''''''''''''</th> <th>Field Id: STATEA-10-03 JV STATEA-10-03 JV STATEA-10-01 JV STATE</th> <th>Field Id: STATEA-10-03 30' STATEA-10-01 4' STATEA-10-11' STATEA-10-11'' STATEA-10-11''' STATEA-10-11'''' STATEA-10-11'''''''''''''''''''''''''''''''''</th>	Field Id: STATEA-10-03 30' STATEA-10-01 4' STATEA-10-11 4' STATEA-10-01 4'' STATEA-10-01 4'' STATEA-10-01 4'' STATEA-10-01 4'' STATEA-10-01 4''' STATEA-10-01 4''''''''''''''''''''''''''''''''''''	Field Id: STATEA-10-03 JV STATEA-10-03 JV STATEA-10-01 JV STATE	Field Id: STATEA-10-03 30' STATEA-10-01 4' STATEA-10-11' STATEA-10-11'' STATEA-10-11''' STATEA-10-11'''' STATEA-10-11'''''''''''''''''''''''''''''''''

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Huns Boah

Kelsey Brooks Project Manager

Final 1.000



Certificate of Analysis Summary 532368

ARCADIS, Midland, TX Project Name: Chevron Sites



Date Received in Lab:Sat Jun-25-16 10:30 amReport Date:21-JUL-16Project Manager:Kelsey Brooks

	Lab Id:	532368-0	13	532368-0	14	532368-0	15	532368-0	16	532368-0	18	532368-0	20		
Analysis Requested	Field Id:	STATEA-10	-02 4'	STATEA-10-	02 10'	STATEA-10-	02 20'	STATEA-10-	02 30'	STATEA-10-	02 50'	STATEA-10-	02 70'		
Analysis Kequestea	Depth:	4 ft			4 ft 10 ft			20 ft		30 ft		50 ft		70 ft	
	Matrix:	SOIL	SOIL			SOIL		SOIL		SOIL		SOIL			
	Sampled:	Jun-24-16 0	0:00	Jun-24-16 0	00:00	Jun-24-16 00:00		Jun-24-16 0	0:00	Jun-24-16 (00:00	Jun-24-16 0	00:00		
Percent Moisture	Extracted:		ľ												
	Analyzed:	Jul-01-16 1	7:05	Jul-01-16 1	7:05	Jul-01-16 1	7:05	Jul-01-16 1	7:05	Jul-01-16 1	7:05	Jul-01-16 1	7:05		
	Units/RL:	%	% RL		RL	%	RL	%	RL	%	RL	%	RL		
Percent Moisture		9.44	9.44 1.00		1.00	12.6	1.00	5.72	1.00	9.15	1.00	6.09	1.00		

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Kelsey Brooks Project Manager


Certificate of Analysis Summary 532368

ARCADIS, Midland, TX Project Name: Chevron Sites



Date Received in Lab:Sat Jun-25-16 10:30 amReport Date:21-JUL-16Project Manager:Kelsey Brooks

	Lab Id:	532368-0	013	532368-0	14	532368-0	15	532368-0	16	532368-0	18	532368-0	20
Analysis Requested	Field Id:	STATEA-10-	-02 4'	STATEA-10-0	02 10'	STATEA-10-0	02 20'	STATEA-10-	02 30'	STATEA-10-0	02 50'	STATEA-10-	02 70'
Analysis Requested	Depth:	4 ft		10 ft		20 ft		30 ft		50 ft		70 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-16 (00:00	Jun-24-16 0	0:00	Jun-24-160	00:00	Jun-24-160	00:00	Jun-24-16 0	0:00	Jun-24-160	00:00
Inorganic Anions by EPA 300/300.1	Extracted:	Jul-06-16 1	2:00	Jul-18-16 14	4:00	Jul-20-16 1	2:00						
	Analyzed:	Jul-07-16 0	08:31	Jul-07-16 0	8:39	Jul-07-16 0	8:47	Jul-07-16 0	8:55	Jul-18-16 20):11	Jul-20-16 1	6:46
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		86.4	11.0	131	55.3	316	57.2	418	53.0	1630	100	865	53.2
Soil pH by EPA 9045C	Extracted:												
	Analyzed:	Jul-05-16 1	1:48										
	Units/RL:	SU	RL	SU	RL	SU	RL	SU	RL				
pH		9.41		9.69		9.60		9.68					
TPH By SW8015B Mod	Extracted:	Jun-28-16 1	15:00	Jun-28-16 1	5:00	Jun-28-16 1	5:00	Jun-28-16 1	5:00				
	Analyzed:	Jun-29-16 (03:25	Jun-29-16 0	3:51	Jun-29-16 0	4:17	Jun-29-16 0	4:44				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C10 Gasoline Range Hydrocarbons		<16.5	16.5	<16.5	16.5	<17.2	17.2	<15.9	15.9				
C10-C28 Diesel Range Hydrocarbons		<16.5	16.5	<16.5	16.5	<17.2	17.2	<15.9	15.9				
Total TPH		<16.5	16.5	<16.5	16.5	<17.2	17.2	<15.9	15.9				

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Kelsey Brooks Project Manager



Certificate of Analysis Summary 532368

ARCADIS, Midland, TX Project Name: Chevron Sites



Date Received in Lab:Sat Jun-25-16 10:30 amReport Date:21-JUL-16Project Manager:Kelsey Brooks

	Lab Id:	532368-02	21	532368-0	22	532368-0	23	532368-0	24	532368-025	532368-026
Analysis Requested	Field Id:	STATEA-10-	-05 4'	STATEA-10-	05 10'	STATEA-10-	05 20'	STATEA-10-)5 30'	VGWUSAT3-02 4'	VGWUSAT3-02 10'
Analysis Kequestea	Depth:	4 ft		10 ft		20 ft		30 ft		4 ft	10 ft
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	SOIL
	Sampled:	Jun-24-16 0	0:00	Jun-24-16 0	0:00	Jun-24-16 (00:00	Jun-24-16 0	0:00	Jun-24-16 00:00	Jun-24-16 00:00
Percent Moisture	Extracted:										1
	Analyzed:	Jul-01-16 1'	7:05	Jul-01-16 1	7:05	Jul-01-16 1	7:05	Jul-01-16 1	7:05		
	Units/RL:	%	RL	%	RL	%	RL	%	RL		
Percent Moisture		3.84	1.00	7.45	1.00	1.61	1.00	8.11	1.00		

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Kelsey Brooks Project Manager



Certificate of Analysis Summary 532368

ARCADIS, Midland, TX Project Name: Chevron Sites



Date Received in Lab:Sat Jun-25-16 10:30 amReport Date:21-JUL-16Project Manager:Kelsey Brooks

	Lab Id:	532368-0	21	532368-0	22	532368-0	23	532368-0	24	532368-0	25	532368-0	26
Analysis Requested	Field Id:	STATEA-10-	-05 4'	STATEA-10-0	05 10'	STATEA-10-0	05 20'	STATEA-10-0	05 30'	VGWUSAT3	-02 4'	VGWUSAT3	-02 10'
Analysis Requested	Depth:	4 ft		10 ft		20 ft		30 ft		4 ft		10 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-16 (00:00	Jun-24-16 0	0:00	Jun-24-16 0	0:00	Jun-24-16 0	0:00	Jun-24-16 0	0:00	Jun-24-16 0	0:00
Inorganic Anions by EPA 300/300.1	Extracted:	Jul-06-16 1	2:00	Jul-06-16 14	4:00	Jul-06-16 14	4:00	Jul-06-16 1	4:00	Jul-20-16 12	2:00	Jul-20-16 1	2:00
	Analyzed:	Jul-07-16 0	9:02	Jul-07-16 0	9:57	Jul-07-16 1	0:21	Jul-07-16 1	0:28	Jul-20-16 1'	7:09	Jul-20-16 1	7:17
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		47.5	10.4	<10.8	10.8	14.2	10.2	23.4	10.9	3340	200	3590	200
Soil pH by EPA 9045C	Extracted:												
	Analyzed:	Jul-05-16 1	5:52	Jul-05-16 1	5:52	Jul-05-16 1	5:52	Jul-05-16 1	5:52				
	Units/RL:	SU	RL	SU	RL	SU	RL	SU	RL				
pH		8.92		9.04		9.27		8.84					
TPH By SW8015B Mod	Extracted:	Jun-29-16 1	4:00	Jun-29-16 1	4:00	Jun-29-16 1	4:00	Jun-29-16 1	4:00				
	Analyzed:	Jun-29-16 1	5:39	Jun-29-16 1	6:59	Jun-29-16 1	7:26	Jun-29-16 1	7:53				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C10 Gasoline Range Hydrocarbons		<15.6	15.6	<16.2	16.2	<15.2	15.2	<16.3	16.3				
C10-C28 Diesel Range Hydrocarbons		<15.6	15.6	<16.2	16.2	<15.2	15.2	<16.3	16.3				
Total TPH		<15.6	15.6	<16.2	16.2	<15.2	15.2	<16.3	16.3				

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Kelsey Brooks Project Manager



Certificate of Analysis Summary 532368

ARCADIS, Midland, TX Project Name: Chevron Sites



Date Received in Lab:Sat Jun-25-16 10:30 amReport Date:21-JUL-16Project Manager:Kelsey Brooks

	Lab Id:	532368-0	27	532368-0	28	532368-0	31	532368-0	32	532368-0	35	532368-0	36
Analysis Requested	Field Id:	VGWUSAT3-	-02 20'	VGWUSAT3	-02 30'	VGWUSAT3-	02 60'	VGWUSAT3	-04 4'	VGWUSAT3	04 30'	VGWUSAT3	3-01 4'
Analysis Kequestea	Depth:	20 ft		30 ft		60 ft		4 ft		30 ft		4 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-16 0	0:00	Jun-24-16 (00:00	Jun-24-16 0	0:00	Jun-24-16 0	0:00	Jun-24-16 (00:00	Jun-24-16 0	00:00
Inorganic Anions by EPA 300/300.1	Extracted:	Jul-18-16 1	4:00	Jul-18-16 1	4:00	Jul-06-16 1	4:00	Jul-18-16 1	4:00	Jul-06-16 1	4:00	Jul-18-16 14	4:00
	Analyzed:	Jul-18-16 2	0:18	Jul-18-16 2	0:26	Jul-07-16 1	0:36	Jul-18-16 2	0:34	Jul-07-16 1	0:44	Jul-18-16 2	0:42
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		546	50.0	635	50.0	22.9	10.8	58.4	10.0	72.2	10.8	681	50.0

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Kelsey Brooks Project Manager



Certificate of Analysis Summary 532368

ARCADIS, Midland, TX Project Name: Chevron Sites



Date Received in Lab:Sat Jun-25-16 10:30 amReport Date:21-JUL-16Project Manager:Kelsey Brooks

	Lab Id:	532368-037			
Analysis Requested	Field Id:	VGWUSAT3-01 10'			
Analysis Kequestea	Depth:	10 ft			
	Matrix:	SOIL			
	Sampled:	Jun-24-16 00:00			
Inorganic Anions by EPA 300/300.1	Extracted:	Jul-06-16 14:00			
	Analyzed:	Jul-07-16 11:07			
	Units/RL:	mg/kg RL			
Chloride		54.4 10.8			

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Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- **F** RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- RL Reporting Limit

MDL Method Detection Limit	SDL Sample Detection Limit	LOD Limit of Detection
PQL Practical Quantitation Limit	MQL Method Quantitation Limit	LOQ Limit of Quantitation

- **DL** Method Detection Limit
- NC Non-Calculable
- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	



Project Name: Chevron Sites

Lab Daten	# : 997171	Sample: 532368-001 / SMP	Batc	h: 1 Matrix	: 5011		
U nits:	mg/kg	Date Analyzed: 06/28/16 20:53	SU	RROGATE R	ECOVERY S	STUDY	
	ТРН В	y SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chloroocta	ane		101	99.9	101	70-135	
o-Terphenyl			52.5	50.0	105	70-135	
Lab Batch	# : 997171	Sample: 532368-002 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 06/28/16 22:10	SU	RROGATE R	ECOVERY	STUDY	
	ТРН В	y SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta	ane		96.5	99.9	97	70-135	
o-Terphenyl			46.9	50.0	94	70-135	
Lab Batch	#: 997171	Sample: 532368-003 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 06/28/16 22:35	st	RROGATE R	ECOVERY	STUDY	
	TPH B	sy SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chloroocta	ane		94.0	99.7	94	70-135	
o-Terphenyl			44.2	49.9	89	70-135	
Lab Batch	# : 997171	Sample: 532368-004 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 06/28/16 23:01	SU	RROGATE R	ECOVERY S	STUDY	
	ТРН В	Sy SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta	ane	-	84.2	100	84	70-135	
o-Terphenyl			41.0	50.0	82	70-135	
Lab Batch	#: 997171	Sample: 532368-005 / SMP	Batc	h: 1 Matrix	: Soil	1	
U nits:	mg/kg	Date Analyzed: 06/28/16 23:27	su	RROGATE R	ECOVERY	STUDY	
	ТРН В	y SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta	ane		87.9	99.8	88	70-135	
			01.7	1 77.0	1 00	10-133	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Chevron Sites

Lab Batch	ders : 5 3236 #: 997171	Sample: 532368-006 / SMP	Batc		: 713.953.484 : Soil		
Units:	mg/kg	Date Analyzed: 06/28/16 23:55	SU	RROGATE R	ECOVERY S	STUDY	
	TPH B	By SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chloroocta	ane		92.0	99.8	92	70-135	
o-Terphenyl			44.9	49.9	90	70-135	
Lab Batch	# : 997171	Sample: 532368-007 / SMP	Batc	h: 1 Matrix	: Soil		
U nits:	mg/kg	Date Analyzed: 06/29/16 00:21	st	RROGATE R	ECOVERY S	STUDY	
	TPH B	By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta	ane		86.0	99.7	86	70-135	
o-Terphenyl			42.2	49.9	85	70-135	
Lab Batch	#: 997171	Sample: 532368-008 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 06/29/16 00:48	su	RROGATE R	ECOVERY S	STUDY	
	ТРН В	By SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chloroocta	ane		89.9	99.7	90	70-135	
o-Terphenyl			43.7	49.9	88	70-135	
Lab Batch	# : 997171	Sample: 532368-009 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 06/29/16 01:16	st	RROGATE R	ECOVERY S	STUDY	
	ТРН В	By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta	ane		92.3	99.7	93	70-135	
o-Terphenyl			45.0	49.9	90	70-135	
Lab Batch		Sample: 532368-010 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 06/29/16 01:42	SU	RROGATE R	ECOVERY S	STUDY	
	TPH B	By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta	ane		85.9	99.9	86	70-135	
			05.7	77.7	00	10-155	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Chevron Sites

Lab Batch	#: 997171	Sample: 532368-011 / SMP	Batc	ch: 1 Matrix	: Soil					
U nits:	mg/kg	Date Analyzed: 06/29/16 02:35	SU	URROGATE R	ECOVERY	STUDY				
	TPH B	Sy SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R 70-135 70-135 70-135 STUDY Control Limits %R 70-135 70-135 70-135 70-135 70-135 70-135 STUDY Control Limits %R 70-135 70-135 70-135 70-135 STUDY Control Limits %R 70-135 70-135 70-135 70-135 70-135 70-135	Flags			
		Analytes			[D]					
1-Chloroocta	ane		92.8	99.8	93	70-135				
o-Terphenyl			45.9	49.9	92	70-135				
Lab Batch	#: 997171	Sample: 532368-012 / SMP	Batc	ch: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 06/29/16 02:59	SU	URROGATE R	ECOVERY	STUDY				
	ТРН В	Sy SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Limits	Flags			
1-Chloroocta	ane		99.9	99.9	100	70-135				
o-Terphenyl			50.1	50.0	100	70-135				
Lab Batch	#: 997171	Sample: 532368-013 / SMP	Batc	ch: 1 Matrix	: Soil	1				
Units:	mg/kg	Date Analyzed: 06/29/16 03:25	SU	URROGATE R	ECOVERY	RY STUDY				
	ТРН В	Sy SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Limits	Flags			
1-Chloroocta	ane	Anarytes	96.4	99.9	96	70.125				
o-Terphenyl			48.3	50.0	90					
Lab Batch		Sample: 532368-014 / SMP	Batc			70-155				
Units:	mg/kg	Date Analyzed: 06/29/16 03:51		JRROGATE R		STUDY				
	ТРН В	Sy SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Limits	Flags			
1-Chloroocta	ane	Analytes	94.5	99.7	95	70.135				
o-Terphenyl			46.7	49.9	93					
Lab Batch		Sample: 532368-015 / SMP	Batc		-	/0 155				
	mg/kg	Date Analyzed: 06/29/16 04:17		URROGATE R		STUDY				
Units:										
Units:	ТРН В	By SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R	Limits	Flage			
Units:		Sy SW8015B Mod Analytes	Found	Amount		Limits %R	Flags			

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Chevron Sites

Work Ore Lab Batch #	ders : 53230 # 997171	58, 532368 Sample: 532368-016 / SMP	Batc	-	: 713.953.484 : Soil	+1	
Units:	mg/kg	Date Analyzed: 06/29/16 04:44	SU	RROGATE R	ECOVERY S	STUDY	
	TPH I	By SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chloroocta	ne		97.7	99.8	98	70-135	
o-Terphenyl			48.7	49.9	98	70-135	
Lab Batch #	: 997250	Sample: 532368-021 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 06/29/16 15:39	SU	RROGATE R	ECOVERY S	STUDY	
	TPH I	By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta	ne	Analytes	92.0	99.7	92	70-135	
o-Terphenyl			46.1	49.9	92	70-135	
Lab Batch #	#: 997250	Sample: 532368-022 / SMP	Batc			10 155	
Units:	mg/kg	Date Analyzed: 06/29/16 16:59		RROGATE R		STUDY	
	TPH I	By SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chloroocta	ne		91.6	99.8	92	70-135	
o-Terphenyl			45.7	49.9	92	70-135	
Lab Batch #	: 997250	Sample: 532368-023 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 06/29/16 17:26	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta	ne		92.4	99.7	93	70-135	
o-Terphenyl			44.7	49.9	90	70-135	
Lab Batch #	: 997250	Sample: 532368-024 / SMP	Batc	h: 1 Matrix	: Soil	1	
Units:	mg/kg	Date Analyzed: 06/29/16 17:53	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta	ne	Analytts	94.9	99.9	95	70-135	
o-Terphenyl			47.1	50.0	94	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Chevron Sites

Units:	mg/kg	Date Analyzed: 06/28/16 19:37	SI	JRROGATE R	ECOVERY	STUDY				
		By SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R 70-135 70-135 VSTUDY Control Limits %R 70-135	Flags			
		Analytes			[D]					
1-Chlorooctar	ne		103	100	103	70-135				
o-Terphenyl			51.6	50.0	103	70-135				
Lab Batch #	: 997250	Sample: 710500-1-BLK / B	ELK Bate	h: 1 Matrix	: Solid					
Units:	mg/kg	Date Analyzed: 06/29/16 14:19	SU	JRROGATE R	ECOVERY	STUDY				
	ТРН В	By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Limits	Flags			
1-Chlorooctar	ne	Analytes	103	100	103	70-135				
o-Terphenyl			52.2	50.0	103					
Lab Batch #	: 997171	Sample: 710455-1-BKS / B			-	10 155				
Units:	mg/kg	Date Analyzed: 06/28/16 20:02		JRROGATE R	-	Y STUDY				
	TPH B	By SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits	Flags			
		Analytes	[13]		[D]	/ U K				
1-Chlorooctar	ne		124	100	124	70-135				
o-Terphenyl			56.5	50.0	113	70-135				
Lab Batch #	: 997250	Sample: 710500-1-BKS / B	KS Bate	h: 1 Matrix	: Solid					
Units:	mg/kg	Date Analyzed: 06/29/16 14:45	SU	JRROGATE R	ECOVERY	STUDY				
	TPH B	By SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Limits	Flags			
1-Chlorooctar	ne	Analytes	124	100	124	70.135				
o-Terphenyl			58.7	50.0	124					
Lab Batch #	: 997171	Sample: 710455-1-BSD / B				10-155				
Units:	mg/kg	Date Analyzed: 06/28/16 20:27		JRROGATE R		STUDY				
	TPH B	Sy SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits	Flage			
		Analytes			[D]					
1-Chloroocta	ne		121	100	121	70-135				
1-Chiorooctai			121	100	121	10 155				

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



Project Name: Chevron Sites

Units:	mg/kg	Date Analyzed: 06/29/16 15:12	SI	RROGATE R	ECOVERV	STUDY	
		By SW8015B Mod	Amount Found	True Amount	Recovery	Control Limits	Flags
		Analytes	[A]	[B]	%R [D]	%R	
1-Chlorooctan	,		130	100	130	70-135	
o-Terphenyl			59.2	50.0	118	70-135	
Lab Batch #:	997171	Sample: 532368-001 S / MS	Batc	h: 1 Matrix	: Soil	1	
Units:	mg/kg	Date Analyzed: 06/28/16 21:19	SU	RROGATE R	ECOVERY S	STUDY	
	TPH B	By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctan	•	Anaryus	115	99.9	115	70-135	
o-Terphenyl			51.1	50.0	102	70-135	
Lab Batch #:	997250	Sample: 532368-021 S / MS	Batc	h: 1 Matrix	: Soil	1	
Units:	mg/kg	Date Analyzed: 06/29/16 16:05	SU	RROGATE R	ECOVERY	STUDY	
	TPH B	Sy SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooctan	•		110	99.9	110	70-135	
o-Terphenyl			45.1	50.0	90	70-135	
Lab Batch #:	997171	Sample: 532368-001 SD / M	SD Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 06/28/16 21:45	SU	RROGATE R	ECOVERY S	STUDY	
	TPH B	Sy SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctan		Analytes	102	00.8		70.125	
o-Terphenyl			123 54.4	99.8	123	70-135 70-135	
Lab Batch #:	997250	Sample: 532368-021 SD / M				10-135	
Units:	mg/kg	Date Analyzed: 06/29/16 16:32		RROGATE R		STUDY	
	ТРН В	Sy SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooctan	•		109	99.7	109	70-135	
o-Terphenyl			46.1	49.9	92	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B



BS / BSD Recoveries



Project Name: Chevron Sites

Work Order #: 532368, 532368							Proj	ect ID:	713.953.48	41	
Analyst: MNR	D	ate Prepar	ed: 07/06/201	16			Date A	nalyzed: (07/06/2016		
Lab Batch ID: 997612 Sample: 710654-1-	BKS	Batcl	n #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / 1	BLANK	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	236	94	250	228	91	3	90-110	20	
Analyst: MNR	D	ate Prepar	ed: 07/06/201	16			Date A	nalyzed: (07/07/2016		
Lab Batch ID: 997641 Sample: 710669-1-	BKS	Batcl	n #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE /]	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Inorganic Anions by EPA 300/300.1 Analytes Chloride	Sample Result	Added	Spike Result	Spike %R	Added	Spike Duplicate	Dup. %R		Limits	Limits	Flag
Analytes	Sample Result [A] <10.0	Added [B] 250	Spike Result [C]	Spike %R [D] 92	Added [E]	Spike Duplicate Result [F]	Dup. %R [G] 93	% 1	Limits %R	Limits %RPD	Flag
Analytes Chloride	Sample Result [A] <10.0 D	Added [B] 250	Spike Result [C] 231 ed: 07/18/201	Spike %R [D] 92	Added [E]	Spike Duplicate Result [F]	Dup. %R [G] 93 Date A	% 1	Limits %R 90-110 07/18/2016	Limits %RPD	Flag
Analytes Chloride Analyst: MNR	Sample Result [A] <10.0 D	Added [B] 250 ate Prepar Batcl	Spike Result [C] 231 ed: 07/18/201	Spike %R %D 92 16 92	Added [E] 250	Spike Duplicate Result [F] 233	Dup. %R [G] 93 Date A	% 1 nalyzed: (Matrix: \$	Limits %R 90-110 07/18/2016 Solid	Limits %RPD 20	Flag
Analytes Chloride Analyst: MNR Lab Batch ID: 998310 Sample: 711075-1-	Sample Result [A] <10.0 D	Added [B] 250 ate Prepar Batcl	Spike Result [C] 231 ed: 07/18/201 h #: 1	Spike %R %D 92 16 92	Added [E] 250	Spike Duplicate Result [F] 233	Dup. %R [G] 93 Date A	% 1 nalyzed: (Matrix: \$	Limits %R 90-110 07/18/2016 Solid	Limits %RPD 20	Flag

Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] = $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: Chevron Sites

Work Order #: 532368, 532368							Pro	ject ID: ´	713.953.48	41	
Analyst: MNR	D	ate Prepar	red: 07/20/20	16			Date A	nalyzed: (07/20/2016		
Lab Batch ID: 998464 Sample: 711178-1	-BKS	Batcl	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK	SPIKE / 2	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	257	103	250	268	107	4	90-110	20	
Analyst: ARM	D	ate Prepar	ed: 06/28/20	16	-!	I	Date A	nalyzed: ()6/28/2016	+	
Lab Batch ID: 997171 Sample: 710455-1	-BKS	Batcl	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK	SPIKE / 2	BLANK	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
TPH By SW8015B Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	918	92	1000	899	90	2	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	965	97	1000	963	96	0	70-135	35	
Analyst: ARM	D	ate Prepar	ed: 06/29/20	16			Date A	nalyzed: (06/29/2016		
Lab Batch ID: 997250 Sample: 710500-1	-BKS	Batcl	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK	SPIKE / 2	BLANK	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
TPH By SW8015B Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	991	99	1000	1040	104	5	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	1100	110	1000	1080	108	2	70-135	35	

Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] = $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: Chevron Sites



Work Order #: 532368							
Lab Batch #: 997612				Proj	ect ID: 7	13.953.4841	
Date Analyzed: 07/07/2016	Date P	Prepared: 07/0	6/2016	Α	analyst: M	INR	
QC- Sample ID: 532368-009 S		Batch #: 1]	Matrix: S	oil	
Reporting Units: mg/kg		MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA	A 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes		[A]	[B]				
Chloride		441	261	635	74	80-120	X
Lab Batch #: 997612				1 1		<u> </u>	1
Date Analyzed: 07/06/2016	Date P	Prepared: 07/0	6/2016	Α	analyst: M	INR	
QC- Sample ID: 532437-015 S		Batch #: 1		1	Matrix: S	oil	
Reporting Units: mg/kg		MATH	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA Analytes	A 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
		520	1250	1(20	07	80.120	
Chloride Lab Batch #: 997641		529	1250	1620	87	80-120	
Date Analyzed: 07/07/2016	Data I	Prepared: 07/0	6/2016		Analyst: M	IND	
QC- Sample ID: 532368-022 S	Date P	Batch #: 1	0/2010		Matrix: S		
Reporting Units: mg/kg		MATH	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA Analytes	A 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride		<10.8	270	231	86	80-120	
Lab Batch #: 997641			I	11		<u> </u>	I
Date Analyzed: 07/07/2016	Date P	Prepared: 07/0	6/2016	A	analyst: M	INR	
QC- Sample ID: 532413-005 S		Batch #: 1			Matrix: S		
Reporting Units: mg/kg		MATH	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA	A 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes		2150		4800	107	80.120	
Chloride		2150	2500	4800	106	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference [E] = 200*(C-A)/(C+B)All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS Recoveries

Project Name: Chevron Sites



Work Order #: 532368 Project ID: 713.953.4841 Lab Batch #: 998310 Date Analyzed: 07/18/2016 Date Prepared: 07/18/2016 Analyst: MNR QC- Sample ID: 532328-017 S Batch #: Matrix: Soil 1 Reporting Units: mg/kg MATRIX / MATRIX SPIKE RECOVERY STUDY Parent Spiked Sample Control **Inorganic Anions by EPA 300** Sample Spike Result %R Limits Flag Result Added [C] [D] %R [A] [B] Analytes Chloride 28.7 250 258 92 80-120 Lab Batch #: 998310 **Date Analyzed:** 07/18/2016 Date Prepared: 07/18/2016 Analyst: MNR QC- Sample ID: 533521-001 S Batch #: Matrix: Soil 1 Reporting Units: mg/kg MATRIX / MATRIX SPIKE RECOVERY STUDY Parent Spiked Sample Control **Inorganic Anions by EPA 300** Sample Flag Spike Result %R Limits Result Added %R [C] [D] [A] [B] Analytes Chloride <10.0 250 274 110 80-120

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference [E] = 200*(C-A)/(C+B)All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries

Project Name: Chevron Sites



Work Order # :	532368						Project II): 713.95	3.4841			
Lab Batch ID:	998464	QC- Sample ID:	533505	-007 S	Ba	tch #:	1 Matrix	x: Soil				
Date Analyzed:	07/20/2016	Date Prepared:	07/20/2	016	An	alyst: N	MNR					
Reporting Units:	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Inorg	canic Anions by EPA 300/300.1	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]		[D]	[E]	Kesunt [F]	[G]	70	/0K	70 KI D	
Chloride		717	1250	2040	106	1250	2010	103	1	80-120	20	
Lab Batch ID:	997171	QC- Sample ID:	532368	-001 S	Ba	tch #:	1 Matrix	x: Soil				
Date Analyzed:	06/28/2016	Date Prepared:	06/28/2	016	An	alyst: A	ARM					
Reporting Units:	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	TPH By SW8015B Mod	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
C6-C10 Gaso	oline Range Hydrocarbons	<15.9	1060	904	85	1060	1090	103	19	70-135	35	
C10-C28 Die	sel Range Hydrocarbons	<15.9	1060	977	92	1060	1080	102	10	70-135	35	
Lab Batch ID:	997250	QC- Sample ID:	532368	-021 S	Ba	tch #:	1 Matrix	x: Soil				
Date Analyzed:	06/29/2016	Date Prepared:	06/29/2	016	An	alyst: A	ARM					
Reporting Units:	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	TPH By SW8015B Mod	Parent Sample	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
		Result	hoppy V		% P	hoppy	Recult H				∣ % Rbu	
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
C6-C10 Gaso	Analytes Dine Range Hydrocarbons			[C] 887			880 880		%	70-135	% RPD 35	

Matrix Spike Percent Recovery $[D] = 100^{*}(C-A)/B$ Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Sample Duplicate Recovery



Project Name: Chevron Sites

Work Order #: 532368					
Lab Batch #: 997612			Project I	D: 713.953.	4841
Date Analyzed: 07/07/2016 07:37 Date Prep	ared: 07/06/2016	5 Ana	lyst:MNR		
QC- Sample ID: 532368-009 D Bat	ch #: 1	Ma	trix: Soil		
Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300/300.1 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	441	440	0	20	
Lab Batch #: 997612					
Date Analyzed: 07/06/2016 18:51 Date Prep	ared: 07/06/2016	5 Ana	lyst:MNR		
QC- Sample ID: 532437-015 D Bat	ch #: 1	Ma	trix: Soil		
Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300/300.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte	500			20	
Chloride	529	502	5	20	
Lab Batch #: 997641	- 05/06/201	<i>.</i> .			
-	ared: 07/06/2016		lyst:MNR		
QC bumple ID: 552500 022 D	ch #: 1		trix: Soil		
Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300/300.1 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<10.8	<10.8	0	20	U
Lab Batch #: 997641	·				
Date Analyzed: 07/07/2016 11:54 Date Prep	ared: 07/06/2016	5 Ana	lyst:MNR		
QC- Sample ID: 532413-005 D Bat	ch #: 1	Ma	t rix: Soil		
Reporting Units: mg/kg	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300/300.1 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	2150	2280	6	20	

Spike Relative Difference RPD 200 * $|\,(B\text{-}A)/(B\text{+}A)\,|$ All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit



Sample Duplicate Recovery



Project Name: Chevron Sites

Work Order #: 532368						
Lab Batch #: 998310				Project I	D: 713.953.	4841
Date Analyzed: 07/18/2016 20:57	Date Prepar	ed: 07/18/2016	Ana	lyst:MNR		
QC- Sample ID: 532328-017 D	Batcl	n#: 1	Ma	trix: Soil		
Reporting Units: mg/kg		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 30 Analyte	00/300.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride		28.7	25.5	12	20	
Lab Batch #: 998310						
Date Analyzed: 07/18/2016 19:08	Date Prepar	ed: 07/18/2016	5 Ana	lyst:MNR		
QC- Sample ID: 533521-001 D	Batch	n#: 1	Ma	trix: Soil		
Reporting Units: mg/kg		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 30 Analyte	00/300.1	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride		<10.0	<10.0	0	20	U
		<10.0	<10.0		20	0
Lab Batch #: 997489 Date Analyzed: 07/01/2016 17:05	Data Propar	ed: 07/01/2016	í Ang	lyst: WRU		
QC- Sample ID: 532368-001 D	Batel			trix: Soil		
Reporting Units: %	Dutch		/ SAMPLE		ATE REC	OVERV
Percent Moisture Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture		5.73	5.48	4	20	
Lab Batch #: 997489		11		1	1	I
Date Analyzed: 07/01/2016 17:05	Date Prepar	ed: 07/01/2016	5 Ana	lyst:WRU		
QC- Sample ID: 532368-011 D	Batcl	n#: 1	Ma	trix: Soil		
Reporting Units: %		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture		3.89	3.66	6	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |

All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit



Sample Duplicate Recovery



Project Name: Chevron Sites

Work Order #: 532368

Lab Batch #: 997493			Project I	D: 713.953.4	4841
Date Analyzed: 07/01/2016 17:05 Date Pre	pared: 07/01/2016	5 Anal	yst: WRU		
QC- Sample ID: 532368-021 D B	atch #: 1	Mat	rix: Soil		
Reporting Units: %	SAMPLE	SAMPLE 1	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Percent Moisture	3.84	3.95	3	20	
Lab Batch #: 997530					
	pared: 07/05/2016	i Anal	yst:WRU		
Date Analyzed: 07/05/2016 11:48 Date Pre	pared: 07/05/2016 atch #: 1		yst:WRU rix: Soil		
Date Analyzed: 07/05/2016 11:48 Date Pre	atch #: 1		rix: Soil	ATE REC	OVERY
Date Analyzed: 07/05/2016 11:48 Date Press QC- Sample ID: 532585-001 D B	atch #: 1	Mat	rix: Soil	ATE REC Control Limits %RPD	OVERY Flag

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: ARCADIS	Acceptable Temperature Range: 0 - 6 degC
Date/ Time Received: 06/25/2016 10:30:00 AM	Air and Metal samples Acceptable Range: Ambient
Work Order #: 532368	Temperature Measuring device used : R8
Sample Rece	pt Checklist Comments
#1 *Temperature of cooler(s)?	4.5
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	Νο
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	Νο
#21 VOC samples have zero headspace (less than 1/4 inch	bubble)? N/A
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? samples for the analysis of HEM or HEM-SGT which are verif analysts.	1
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnA	Ac+NaOH? N/A

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by: Mary Alexis Pegron Mary Negron Checklist reviewed by: Mary Moah Kelsey Brooks

Date: 06/27/2016

Date: 06/28/2016

Address:
City State
Project Name/Location (City, State); Sampler's Printed Name:
Sample ID
A-10 513-4 4
(0
20
h 5-80
01
34
56
h 104-25
0
20
513-2 H
10
Special Instructions/Comments:
Laboratory Information and Receipt Lab Name: Cooler Custo
□ Cooler packed with ice (✓)
Specify Turnaround Requirements:
Shipping Tracking #:

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Final 1.000

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Contact & Company Name:	8			Page 3 of5323
Ind Results to:	713.753 Fax	", 4 8 4) Filtered (*) # of Containers Information		Keys Keys Preservation Key: Container Information Key: A. H,SO, 1. 40 ml Vial B. HCL 2. 1L Amber C. HNO, 3. 250 ml Plastic D. NaOH 4. 500 ml Plastic
ed Name/Location (City, State):	MFri. PhHIQ al Castis . Cu	2	TER ANALYSIS & METHOD	
Sampler's Printed Name:	Sampler's Signature:	100		- Soil
Sample ID	ō	Matrix 15		W-Water SL-Sludge T-Tissue A-Air
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				hold
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4				1.671
Special Instructions/Comments:			□ Special QA/QC Instructions(✓):	
Laboratory Informatic	on and Receipt	Relinquished By	CReceived Bv	
-	Cooler Custody Seal (✓)	51	Printed Name: Printed Name:	Relinquished By Laboratory Received By Name: Printed Name:
Cooler packed with ice (✓) Specify Turnaround Requirements:	Intact Not Intact		Signature: Signature	re: Signature:
	Sample Receipt:	Firm A/Calis	Firm Courier	urler: Firm:
	Condition/Cooler Temp:	Date/Time: 1 700 0	Date/Time: Date/Time:	ne: Date/Time:

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PINK – Retained by Arcadis	YELLOW – Lab copy	WHITE – Laboratory returns with results	Distribution: W	
Date/Time:	2 24 10 DaterTime:	6/24 1700 Date me		
Firm	Finn/Courier:	calis	Condition/Cooler Temp	Shipping Tracking #:
u u		8	Sample Receipt:	Specify Turnaround Requirements:
Signature:	Jult	Signature: Signature:	Intact Not Intact	□ Cooler packed with ice (✓)
Y Laboratory Received By Printed Name:	Printed Name:	Printed Na	Cooler Custody Seal (イ)	
		Relinquished By	on and Receipt	Laboratory Information and Receipt
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				Special Instructions/Comments:
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	4010			01
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SL - Sludge A - Air		Matrix / CS / /	Collection Type (V) Date Time Comp Grad	Sample ID
Matrix Key: SO-Soll SE-Sediment NL-NAPL/OIL		101	Sampler's Signature:	
G. Other: 8. 8 oz. Glass H. Other: 9. Other:		125/	Project #:	Someted Detailed
	ANALYSIS & METHOD	PARAMETER		
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53228	FORM Page of_	ANALYSIS REQUEST FORM	Telephone	Contact & Company Na
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()	Sample Receipt:			dy Seal (V)	Laboratory Information and Receipt			t e														8	Collection Type (V)	Sampler's Signature	Cor	, Paria a	E-mail Address:		N 55 8 21	
1700	Film A/Calic Firm/Course M	Signature Signature	As viers Att	inquished By	America adams	Sama info AS.			-10				STATE 410 - 01 / 41	¥ (301)	(201)	1 (10'5	STATE AID - 03 (4)	¥ (3o')	(20')	(101)	STATEA 10 - 04 (4')	(Matrix 15	10111	~ /×/ / /	IChy IS PAKAMETER ANALYSIS	Container Information	# of Containers	Sul Fillered (r)	NALYSIS REQUES
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	PINK – Retained by Arcadis	WHITE - Laboratory returns with results	Distribution: WHIT	0.07/1/Pon.iiin
	PaterTime	700 Datempe AAAA		20730826 Cold AR Form 08 97 204 F
		Firm Accilis FirmCourier	Sample Receipt:	Shipping Tracking #:
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inal 1.	G. Other: 6. 402. Glass H. Other: 9. 0ther:	11111	Sampler's Signature.	Sampler's Printed Narrie:
	Other:	PA T	Project # Part MAC ENCLIDES	Project Name/Location (City, State):
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1		CHAIN OF CUSTODY & LABORATORY		
				GADCADIC

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ation and Receipt Cooler Custody Seal (V) I Intact Sample Receipt: Condition/Cooler Temp:		Collection Type (*) Date Time Comp Grab	Fax: Fax: Fax: AFA: Address: AFA: ACHIO CV
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ANALYSIS REQUEST FORM Page 3 of Lab Work Orde	Page 3 of Lab Work Orde	menerality of a series and a series of a series of the ser	Consecta Company Plane

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PINK - Retained by Arcadis

Distribution: WHITE - Labo	Condition/Cooler Temp:	Requirements Sample Receipt: Firm	5	Laboratory Information and Receipt Cooler Custody Seal (V) Printed Name	Special Instructions/Comments:			30		Sample ID Collection Type (1) Matrix	San	Project NameLocation (City, State) Project #	Send R City State Zip E-main Autorss. P. HI @ citCeil: 5.	
ratory returns with results	24 17/11 Date fine: Although Internet	8	wichs Printed Name	telinquished By Oanytake Nauna Corva	Special QA/QC Instructions(*):		1301	(20)	Verw 0.5 act 3 (4 1)		1	PARAMETER ANALYSIS & METHOD	f of Containers Container Information	
PINK – Retained by Arcadis	Firm	Signature	A service of the serv	homs f. fet a still			they heit	hets test	huld	W-Water SL-Sudge SW-Sample Wipe T-Tissue A-Air Other:	G. Other. 8. 8 oz. Glass H. Other: 9. Other Matrix Key: 10.0ther	າດເທີ່	A. H ₂ SO, I. do nl Val B. HCL C. HNCL C. HNCL J. 2. 11. Amber 2. 11. Amber 3. 200 ml Pleastic 4. 500 ml Pleastic	7

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XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: ARCADIS	Acceptable Temperature Range: 0 - 6 degC
Date/ Time Received: 06/25/2016 10:30:00 AM	Air and Metal samples Acceptable Range: Ambient
Work Order #: 532368	Temperature Measuring device used : R8
Sample Recei	ipt Checklist Comments
#1 *Temperature of cooler(s)?	4.5
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	Νο
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	Νο
#21 VOC samples have zero headspace (less than 1/4 inch	bubble)? N/A
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? I samples for the analysis of HEM or HEM-SGT which are verif analysts.	•
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnA	Ac+NaOH? N/A

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

 Checklist completed by:
 Mary Medus Negron
 Date: 06/27/2016

 Mary Negron
 Date: 06/28/2016

 Checklist reviewed by:
 Mary Moah
 Date: 06/28/2016

 Kelsey Brooks
 Date: 06/28/2016
Analytical Report 556451

for Arcadis - Roseville, CA

Project Manager: Brett Krehbiel

State A 10

06-JUL-17

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400) Xenco-San Antonio: Texas (T104704534) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



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06-JUL-17

Project Manager: **Brett Krehbiel Arcadis - Roseville, CA** 101 Creekside Ridge CT 200 Roseville, CA 95678

Reference: XENCO Report No(s): **556451 State A 10** Project Address: Buckeye NM

Brett Krehbiel:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 556451. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 556451 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Huns hoah

Kelsey Brooks Project Manager

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Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 556451



Arcadis - Roseville, CA, Roseville, CA

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-3-W-170627	W	06-27-17 11:03		556451-001
EB-1-W-170627	W	06-27-17 11:11		556451-002
MW-1-W-170627	W	06-27-17 11:26		556451-003
MW-2-W-170627	W	06-27-17 11:46		556451-004
DUP-01-W-170627	W	06-27-17 00:00		556451-005

CASE NARRATIVE SUMMARY



Client Name: Arcadis - Roseville, CA Project Name: State A 10

Project ID: Work Order Number: 556451 Report Date: 06-JUL-17 Date Received: 28-JUN-17

Huns Boah

Kelsey Brooks Project Manager

Certificate of Analytical Results 556451 Arcadis - Roseville, CA, Roseville, CA



Sample Id:	MW-3-W-170627		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	1: 556451-001		Date Collecte	ed: 06.27.17	11.03	Date R	eceived: 06.28.	17 10.0	00
Analytical Me	thod: Inorganic Anions by	EPA 300/300.1				Prep M	lethod: E300P		
Analyst:	MGO		% Moist:			Tech:	MGO		
Seq Number:	3021487		Date Prep: 06	5.30.17 13.30					
			Prep seq: 72	27067					
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride		16887-00-6	23.6	0.500	0.0858	mg/L	06.30.17 14:02		1
Sample Id:	EB-1-W-170627		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	1: 556451-002		Date Collecte	ed: 06.27.17	11.11	Date R	eceived: 06.28.	17 10.0	00
Analytical Me	thod: Inorganic Anions by	EPA 300/300.1				Pren M	fethod: E300P		
Analyst:	MGO		% Moist:			Tech:	MGO		
Seq Number:	3021487		Date Prep: 07	7.03.17 16.00					
1			Prep seq: 72						
Parameter	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride		16887-00-6	< 0.0858	0.500	0.0858	mg/L	07.04.17 03:41	U	1
Sample Id:	MW-1-W-170627		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	1: 556451-003		Date Collecte	ed: 06.27.17	11.26	Date R	eceived: 06.28.	17 10.0	00
Analytical Me	thod: Inorganic Anions by	EPA 300/300.1				Prep M	fethod: E300P		
Analyst:	MGO		% Moist:			Tech:	MGO		
Seq Number:	3021487		Date Prep: 06	5.30.17 13.30					
			Prep seq: 72	27067					
Paramete	r	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride		16887-00-6	66.7	0.500	0.0858	mg/L	06.30.17 14:33		1
Sample Id:	MW-2-W-170627		Matrix:	Water		Sample	e Depth:		
Lab Sample Id	1: 556451-004		Date Collecte	ed: 06.27.17	11.46	Date R	eceived: 06.28.	17 10.0	00
Analytical Me	thod: Inorganic Anions by	EPA 300/300.1				Prep M	fethod: E300P		
Analyst:	MGO		% Moist:			Tech:	MGO		
Seq Number:	3021487		Date Prep: 06	5.30.17 13.30					
			Prep seq: 72	27067					
	r	CAS	Result	MQL	SDL	Units	Analysis	Flag	Dil Factor
Parameter	•	Number					Date	0	

Certificate of Analytical Results 556451 Arcadis - Roseville, CA, Roseville, CA

SOLP ACCREDING

Sample Id: DUP-01-W-170627	Matrix:	Water		Sample	e Depth:	
Lab Sample Id: 556451-005	Date Collecte	ed: 06.27.17 0	00.00	Date R	eceived: 06.28.	17 10.00
Analytical Method: Inorganic Anions by EPA 300/300.	.1			Prep M	lethod: E300P	
Analyst: MGO	% Moist:			Tech:	MGO	
Seq Number: 3021487	Date Prep: 06	5.30.17 13.30				
	Prep seq: 727067					
Parameter CAS Number	Result	MQL	SDL	Units	Analysis Date	Dil Factor Flag
Chloride 16887-00-6	104	2.50	0.429	mg/L	06.30.17 14:48	5

Certificate of Analytical Results 556451 Arcadis - Roseville, CA, Roseville, CA

Sample Id: 727067-1-BLK	Matrix:	Water		Sample	e Depth:		
Lab Sample Id: 727067-1-BLK	Date Collecte	d:		Date R	eceived:		
Analytical Method: Inorganic Anions by EPA 300/30	0.1			Prep M	lethod: E300P		
Analyst: MGO	% Moist:			Tech:	MGO		
Seq Number: 3021487	Date Prep: 06	5.30.17 13.30					
	Prep seq: 72	Prep seq: 727067					
Parameter CAS Number	er Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride 16887-00-	-6 <0.0858	0.500	0.0858	mg/L	06.30.17 13:40	U	1

CHRONOLOGY OF HOLDING TIMES



Analytical Method :	Inorganic Anions by EPA 300/300.1
Work Order #:	556451

Date Received: 06/28/17

Client : Arcadis - Roseville, CA

Project ID:

Field Sample ID	Lab Sample ID	Date Collected	Date Extracted	Max Holding Time Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed (Days)	Q
MW-3-W-170627	556451-001	06/27/17			06/30/17	28	3	Р
EB-1-W-170627	556451-002	06/27/17			07/04/17	28	7	Р
MW-1-W-170627	556451-003	06/27/17			06/30/17	28	3	Р
MW-2-W-170627	556451-004	06/27/17			06/30/17	28	3	Р
DUP-01-W-170627	556451-005	06/27/17			06/30/17	28	3	Р

F = These samples were analyzed outside the recommended holding time.

P = Samples analyzed within the recommended holding time.

Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- **F** RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- RL Reporting Limit

MDL Method Detection Limit	SDL Sample Detection Limit	LOD Limit of Detection
PQL Practical Quantitation Limit	MQL Method Quantitation Limit	LOQ Limit of Quantitation

- **DL** Method Detection Limit
- NC Non-Calculable
- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	

Analytical Log

Analytical Method:	Inorganic Anions by EPA 300/300.1	Batch #:	3021487
Project Name:	State A 10	Project ID:	
Client Name:	Arcadis - Roseville, CA	WO Number:	556451

Client Sample Id	Lab Sample Id	QC Types
DUP-01-W-170627	556451-005	SMP
EB-1-W-170627	556451-002	SMP
MW-1-W-170627	556451-003	SMP
MW-2-W-170627	556451-004	SMP
MW-3-W-170627	556451-001	SMP
	556451-001 S	MS
	556451-001 SD	MSD
	727067-1-BKS	BKS
	727067-1-BLK	BLK
	727067-1-BSD	BSD

BS / BSD Recoveries



Project Name: State A 10

Work Order #: 556451							Proj	ject ID:			
Analyst: MGO	D	ate Prepai	red: 06/30/201	7			Date A	nalyzed: (06/30/2017		
Lab Batch ID: 3021487 Sample: 727067-1-E	SKS	Bate	h #: 1					Matrix: \	Water		
Units: mg/L		BLAN	K /BLANK S	SPIKE / I	BLANK S	SPIKE DUPI	LICATE	RECOVI	ERY STUI	DY	
Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]		Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Chloride	<0.0858	25.0	23.5	94	25.0	23.8	95	1	90-110	20	

Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] = $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: State A 10



Work Order # :	556451						Project II):				
Lab Batch ID:	3021487	QC- Sample ID:	556451	-001 S	Ba	tch #:	1 Matrix	k: Water				
Date Analyzed:	06/30/2017	Date Prepared:	06/30/2	017	Ar	alyst: N	MGO					
Reporting Units:	mg/L		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERYS	STUDY		
Inorganic Anions by EPA 300/300.1		Parent Sample	Spike	Spiked Sample Result	Sample		Duplicate Spiked Sample	-	RPD	Control Limits	Control Limits	Flag
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Chloride		23.6	25.0	46.8	93	25.0	47.4	95	1	90-110	20	

Matrix Spike Percent Recovery $[D] = 100^{*}(C-A)/B$ Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Attachment A Laboratory Data Package Cover Page

Project Name:

This Data package consists of :

Laboratory Number: 556451

Laboratory Batch No(s) 727067

This signature page, the laboratory review checklist, and the following reportable data:

State A 10

- X R1 Field chain-of-custody documentation;
- X R2 Sample identification cross-reference;
- \mathbf{X} R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC 5
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
- X R4 Surrogate Recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
- X R5 Test reports/summary forms for blank samples;
- **X** R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
- X R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs) and
 - e) The laboratory's MS/MSD QC limits
- X R8 Laboratory anaytical duplicate (if applicable) recovery and precision:
 - a) the amount of analyte measured in the duplicate,
 - b) the calculated RPD, and
 - c) the laboratory's QC limits for analytical duplicates.

 \boxed{X} R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;

 \mathbf{X} R10 Other problems or anomalies.

X Exception Report for every "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies, observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [] This laboratory meets an exception under 30 TAC 25.6 and was last inspection by [] TCEQ or [] ______ on (enter date of last inspection). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Kelsey Brooks

Huns hoah

Name (Printed)

Signature

Project Manager
Official Title (printed)

06-JUL-17 Date

Labo	orator	y Name: XENCO LABORATORIES	LRC Date : 06-JUL-17					
Proje	ect Na	ame: State A 10	Laboratory Job Number : 556451					
Revi	ewer	Name: KEB	Batch Number(s): 727067					
#1	A ²	Description		Yes	No	NA ³	NR ⁴	
R1	OI	Chain-of-Custody (COC)		1	110	III	T	
		Did samples meet the laboratory's standard conditio	ng of sample accontability upon receipt?	X				-
		Were all departures from standard conditions descri				X		
R2	01	Sample and Quality Control (QC) Identific		1		Α		
112		Are all field sample ID numbers cross-referenced to		X				-
		Are all laboratory ID numbers cross-referenced to the		X				-
R3	OI	Test Reports		1				
K 5		Were all samples prepared and analyzed within hold	ling times?	X				-
		Other than those results <mql, all="" other="" raw="" td="" v<="" were=""><td></td><td>X</td><td></td><td></td><td></td><td>+</td></mql,>		X				+
		Were calculations checked by a peer or supervisor?	-	X	<u> </u>			
		Were all analyte identifications checked by a peer of super visor.		X				-
		Were sample detection limits reported for all analyte	*	X				+
		Were all results for soil and sediment samples report		+		X		+
		Were % moisture (or solids) reported for all soil and		+	<u> </u>	X		+
		Were bulk soil/solid samples for volatile analysis ex	stracted with methanol per SW846 Method 5035?			X		1
If required for the project, were TICs reported?						X		
R4	0	Surrogate Recovery Data		1				
		Were surrogates added prior to extraction?				X		
		Were surrogate percent recoveries in all samples wi	thin the laboratory QC limits?			X		
R5	OI	Test Reports/Summary Forms for Blank Sa	amples					
		Were appropriate type(s) of blanks analyzed?		X				
		Were blanks analyzed at the appropriate frequency	?	X				
		Were method blanks taken through the entire analyt procedures ?	ical procedure, including preparation and, if applicable, cleanup	X				
		Were Blank Concentrations <mql?< td=""><td></td><td>X</td><td></td><td></td><td></td><td></td></mql?<>		X				
R6	OI	Laboratory Control Samples (LCS):						
		Were all COCs included in the LCS?		X				
		Was each LCS taken through the entire analytical pr	rocedure, including prep and cleanup steps?	Х				
		Were LCSs analyzed at the required frequency?		X				
		• •	the laboratory QC limits? the laboratory's capability to detect the COCs at the MDL used to	X X				
		calculate the SDLs? Was the LCSD RPD within the QC limits?		X				-
R7	OI	Matrix Spike (MS) and Matrix Spike Dupli	icate (MSD) data	1				
		Were the project/method specified analytes included		X				
		Were MS/MSD analyzed at the appropriate frequent	cy?	Х				
		Were MS (and MSD, if applicable) %Rs within the	laboratory QC limits?	X				
		Were MS/MSD RPDs within the laboratory QC lim	its?	X				
R8	OI	Analytical Duplicate Data						
_		Were appropriate analytical duplicates analyzed for				X		
		Were analytical duplicates analyzed at the appropria	· ·			X		
		Were RPDs or relative standard deviations within the	ne laboratory QC limits?			X		
R9	OI	Method Quantitation Limits (MQLs)						
		Are the MQLs for each method analyte included in		X				
		Do the MQLs correspond to the concentration of the		X				
		Are unadjusted MQLs and DCSs included in the lab	poratory data package?	X				
R10	OI	Other Problems/Anomalies						
		Are all known problems/anomalies/special condition		X				
		methods associated with this laboratory data packag		X				
			wer the SDL to minimize the matrix interference effects on the	X	1	1		

Labo	rator	y Name: XENCO LABORATORIES	LRC Date : 06-JUL-17					
Proje	ect Na	ame: State A 10	Laboratory Job Number: 556451					
Revi	ewer	Name: KEB	Batch Number(s) : 727067					
#1	A^2	Description		Yes	No	NA ³	NR ⁴	FR#
S 1	OI	Initial Calibration (ICAL)		1	110	1171		
		Were response factors and/or relative response factors	ctors for each analyte within OC limits?	X				-
		Were percent RSDs or correlation coefficient crite		X				
		Was the number of standards recommended in the		X				
		Were all points generated between the lowest and		X				
		Are ICAL data available for all instruments used?		X				-
		Has the initial calibration curve been verified usin		X				-
S2	OI	Initial and Continuing Calibration Verification (ICCV and CCV) and continuing calibration blank						
		Was the CCV analyzed at the method-required fre	-	X				-
		Were percent differences for each analyte within the method-required QC limits? Was the ICAL curve verified for each analyte?						
								-
		Was the absolute value of the analyte concentration in the inorganic CCB <mdl?< td=""><td>X</td><td></td><td></td></mdl?<>				X		
S 3	0	Mass Spectral Tuning]				
		Was the appropriate compound for the method used for tuning?				X		
		Were ion abundance data within the method-requi			X		-	
S4	0	Internal Standard (IS)		1				
			ere IS area counts and retention times within the method-required QC limits?					
S5	OI	Raw Data (NELAC 5.5.10)						
		Were the raw data (for example, chromatograms,	spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations fla		X				-
S6	0	Dual Column Confirmation		1				
		Did dual column confirmation results meet the me	ethod-required QC?			X		-
S 7	0	Tentatively Identified Compounds (TICs)]				
		If TICs were requested, were the mass spectra and				X		
S 8	Ι	Interference Check Sample (ICS) Results		1				
		Were percent recoveries within method QC limits				X		
S 9	Ι	Serial Dilutions, Post Digestions Spikes, a	nd Method of Standard Additions	1				
			arity within the QC limits specified in the method?			X		
S10	OI	Method Detection Limit (MDL) Studies		1				
		Was a MDL study performed for each reported an	nalyte?	X				-
		Is the MDL either adjusted or supported by the an		X				-
511	OI	Proficiency Test Reports	•					
			he applicable proficiency tests or evaluation studies?	X				
512	OI	Standards Documentation		1				
		Are all standards used in the analyses NIST-tracea	able or obtained from other appropriate sources?	X				
\$13	OI	Compound/Analyte Identification Proced		1				
		Are the procedures for compound/analyte identified		X				
S14	OI	Demonstration of Analyst Competency (I		1				
-	<u> </u>	Was DOC conducted consistent with NELAC Cha		X				-
		Is documentation of the analyst's competency up-t		X	<u> </u>			+
\$15	OI	Verification/Validation Documentation for						
	<u> </u>	Are all methods used to generate the data docume		X				
S16	OI	-						
210	51	Laboratory Standard Operating Procedu	method performed?	X				\blacksquare

1. Items identified by the letter "R" must be included in the laboratory data package submitted to the TCEQ-required report(s). Items identified by

the letter "S" should be retained and made available upon request for the appropriate retention period. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable). 2.

NA = Not applicable;
 NR = Not reviewed;

5. ER# = Exception Report Identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Attachment A (cont'd): Laboratory Review (Checklist: Exception Reports
Laboratory Name: XENCO LABORATORIES	LRC Date: 06-JUL-17
Project Name: State A 10	Laboratory Job Number: 556451
Reviewer Name: KEB	Batch Number(s) : 727067
ER# 1 DESCRIPTION	

1 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No is checked on the LRC).

DCS Summary



Arcadis - Roseville, CA, Roseville, CA

State A 10

Analytical Method: Inorganic Anions by EPA 300/300.1

Matrix: Water

Parameter	Spike Amount	Actual Amount	Units
Chloride	0.250	0.177	mg/L

ned by ARC.	Lab copy	YELLOW – Lab copy	WHITE - Laboratory returns with results	Distribution: WHITE	20730826 CofC AR Form 01.12.2007
Data (17 28/17 1000	Date/Time:	DaterTime: UV/27117 1VOL	hala 1602	Condition/Cooler Temp: 066	a Burerori Eurofence
From YEMLO	Firm/Courier:	Firm/Courier	ARCHARS		
NL D. M.	Signature	BUMMINGUM	and		Shock Unarround Requirements
Mary A Negron	Printed Name:	BRIDING WINNER	There is a surely Sike a guell	0	X Wes
Relinquished By Laboratory Received By	Relinqu	Received By	Relinquished By		Laboratory Information and Receipt
1.10		□ Special QA/QC Instructions(✓):			opecial instructions/comments:
Corrected Temp: 4 7%				W X XW	DUP-01-W-DOECT
(6-23: +0.2°C)				100	
CE-ID & OTO IR ID:R-8				1	
			Jan Jan		
			/		
			-	M Y 561 4	Wm-2-M-42024
				11 N	1700 01
				100 X	
				X DIL	
Stek A-10 Somples			-	W X 103 X W	M62-3-12-170527
REMARKS	/ /		1 4 1	Time Comp Grab	
W - Water SL - Sludge SW - Sample Wipe T - Tissue A - Air Other:	/ /	/ / /	1 4 1	Collection Type (V) Matrix	Sample ID
SE - Sec	/	/ / /	/ / /	Sampler's Signifume:	Los
H. Other 9. Other 10. Other	/	/ / /		rivjevi n.	Stele A 10 Backeye, NM
0.00 7	/		- / / /	Brest. Krehbxlearcests.c	CA 52578
6.0	O	ANALYSIS & METHOD	PARAMETER ANA	E-mail Address:	City
			Container Information		+ 4 Soite 20
N :			# of Containers		Address:
			Filtered (V)	786-786-5382	Best Keckhich ARCATES
Keys			Preservative	Telephone:	Contact & Company Name:
Lab Work Order #	Page of		ANALYSIS REQUEST FO	AN	Whathicture Vater Environment Bublings
		BOBATOBY	CHAIN OF CHISTONY & I ABOBATOBY	CHAINO	DADCADIC ID#:

Page 19 of 20

Final 1.000



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: ARCADIS	Acceptable Temperature Range: 0 - 6 degC
Date/ Time Received: 06/28/2017 10:00:00 AM	Air and Metal samples Acceptable Range: Ambient
Work Order #: 556451	Temperature Measuring device used : R8
Sample Recei	pt Checklist Comments
#1 *Temperature of cooler(s)?	4.7
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	N/A
#5 *Custody Seals intact on shipping container/ cooler?	N/A
#6 Custody Seals intact on sample bottles?	N/A
#7 *Custody Seals Signed and dated?	N/A
#8 *Chain of Custody present?	Yes
#9 Sample instructions complete on Chain of Custody?	Yes
#10 Any missing/extra samples?	Νο
#11 Chain of Custody signed when relinquished/ received?	Yes
#12 Chain of Custody agrees with sample label(s)?	Yes
#13 Container label(s) legible and intact?	Yes
#14 Sample matrix/ properties agree with Chain of Custody?	Yes
#15 Samples in proper container/ bottle?	Yes
#16 Samples properly preserved?	Yes
#17 Sample container(s) intact?	Yes
#18 Sufficient sample amount for indicated test(s)?	Yes
#19 All samples received within hold time?	Yes
#20 Subcontract of sample(s)?	N/A
#21 VOC samples have zero headspace?	N/A

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst: JKR

PH Device/Lot#: 213315

Checklist completed by: Jessica Kramer

Date: 06/28/2017

Checklist reviewed by:

Date:

Analytical Report 560293

for Arcadis - Houston

Project Manager: Jonathan Olsen

HES Transfer Sites

23-AUG-17

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400) Xenco-San Antonio: Texas (T104704534) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



23-AUG-17



Project Manager: **Jonathan Olsen Arcadis - Houston** 10205 Westheimer Rd., Suite 800 Houston, TX 77042

Reference: XENCO Report No(s): 560293 HES Transfer Sites Project Address: Buckeye, NM

Jonathan Olsen:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 560293. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 560293 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Huns hoah

Kelsey Brooks Project Manager

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Sample Id

State A10-07(4') State A10-06(4')

Sample Cross Reference 560293



Arcadis - Houston, Houston, TX

HES Transfer Sites

	Matrix	Date Collected	Sample Depth	Lab Sample Id
)	S	08-14-17 11:22		560293-001
)	S	08-14-17 12:17		560293-002



CASE NARRATIVE

Client Name: Arcadis - Houston Project Name: HES Transfer Sites

Project ID: Work Order Number(s): 560293
 Report Date:
 23-AUG-17

 Date Received:
 08/16/2017

Sample receipt non conformances and comments:

Level II Reporting

Sample receipt non conformances and comments per sample:

None



Project Id:Contact:Jonathan OlsenProject Location:Buckeye, NM

Certificate of Analysis Summary 560293

Arcadis - Houston, Houston, TX Project Name: HES Transfer Sites



Date Received in Lab:Wed Aug-16-17 10:00 amReport Date:23-AUG-17Project Manager:Kelsey Brooks

	Lab Id:	560293-001	560293-002		
Analysis Requested	Field Id:	State A10-07(4')	State A10-06(4')		
Analysis Kequestea	Depth:				
	Matrix:	SOIL	SOIL		
	Sampled:	Aug-14-17 11:22	Aug-14-17 12:17		
Inorganic Anions by EPA 300/300.1	Extracted:	Aug-22-17 10:30	Aug-22-17 10:30		
	Analyzed:	Aug-22-17 18:24	Aug-22-17 18:47		
	Units/RL:	mg/kg RL	mg/kg RL		
Chloride	Chloride		120 4.96		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Huns Boah

Kelsey Brooks Project Manager



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- **F** RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- RL Reporting Limit

MDL Method Detection Limit	SDL Sample Detection Limit	LOD Limit of Detection
PQL Practical Quantitation Limit	MQL Method Quantitation Limit	LOQ Limit of Quantitation

- **DL** Method Detection Limit
- NC Non-Calculable
- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	



BS / BSD Recoveries



Project Name: HES Transfer Sites

Work Order #: 560293							Proj	ject ID:			
Analyst: MGO	D	ate Prepar	ed: 08/22/201	7			Date A	nalyzed: (08/22/2017		
Lab Batch ID: 3025725 Sample: 729750-1-B	SKS	Batcl	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK S	SPIKE / I	BLANK S	SPIKE DUPI	LICATE	RECOV	ERY STUD	ΟY	
	Blank Sample Result [A]		Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate Bogult [F]	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Chloride	<4.90	245	228	93	248	236	95	3	90-110	20	

Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] = $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes

Analytical Report 560293

for Arcadis - Houston

Project Manager: Jonathan Olsen

HES Transfer Sites

23-AUG-17

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400) Xenco-San Antonio: Texas (T104704534) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



23-AUG-17



Project Manager: **Jonathan Olsen Arcadis - Houston** 10205 Westheimer Rd., Suite 800 Houston, TX 77042

Reference: XENCO Report No(s): 560293 HES Transfer Sites Project Address: Buckeye, NM

Jonathan Olsen:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 560293. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 560293 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Huns hoah

Kelsey Brooks Project Manager

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Sample Id

State A10-07(4') State A10-06(4')

Sample Cross Reference 560293



Arcadis - Houston, Houston, TX

HES Transfer Sites

	Matrix	Date Collected	Sample Depth	Lab Sample Id
)	S	08-14-17 11:22		560293-001
)	S	08-14-17 12:17		560293-002



CASE NARRATIVE

Client Name: Arcadis - Houston Project Name: HES Transfer Sites

Project ID: Work Order Number(s): 560293
 Report Date:
 23-AUG-17

 Date Received:
 08/16/2017

Sample receipt non conformances and comments:

Level II Reporting

Sample receipt non conformances and comments per sample:

None



Project Id:Contact:Jonathan OlsenProject Location:Buckeye, NM

Certificate of Analysis Summary 560293

Arcadis - Houston, Houston, TX Project Name: HES Transfer Sites



Date Received in Lab:Wed Aug-16-17 10:00 amReport Date:23-AUG-17Project Manager:Kelsey Brooks

	Lab Id:	560293-001	560293-002			
Analysis Requested	Field Id:	State A10-07(4')	State A10-06(4')			
Analysis Kequestea	Depth:					
	Matrix:	SOIL	SOIL			
	Sampled:	Aug-14-17 11:22	Aug-14-17 12:17			
Inorganic Anions by EPA 300/300.1	Extracted:	Aug-22-17 10:30	Aug-22-17 10:30	1		
	Analyzed:	Aug-22-17 18:24	Aug-22-17 18:47			
	Units/RL:	mg/kg RL	mg/kg RL			
Chloride		16.5 4.92	120 4.96			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Huns Boah

Kelsey Brooks Project Manager



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
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- **K** Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- RL Reporting Limit

MDL Method Detection Limit	SDL Sample Detection Limit	LOD Limit of Detection
PQL Practical Quantitation Limit	MQL Method Quantitation Limit	LOQ Limit of Quantitation

- **DL** Method Detection Limit
- NC Non-Calculable
- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	



BS / BSD Recoveries



Project Name: HES Transfer Sites

Work Order #: 560293							Proj	ject ID:			
Analyst: MGO	D	ate Prepar	ed: 08/22/201	7			Date A	nalyzed: (08/22/2017		
Lab Batch ID: 3025725 Sample: 729750-1-B	SKS	Batcl	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK S	SPIKE / I	BLANK S	SPIKE DUPI	LICATE	RECOV	ERY STUD	ΟY	
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R [D]	Spike Added	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	נען	[E]	Kesuit [F]	[G]				
Chloride	<4.90	245	228	93	248	236	95	3	90-110	20	

Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] = $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries

Project Name: HES Transfer Sites



Work Order # :	560293						Project ID):				
Lab Batch ID:	3025725	QC- Sample ID:	560112	-001 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	08/22/2017	Date Prepared:	08/22/2	017	An	alyst: N	MGO					
Reporting Units:	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	FE REC	OVERY	STUDY		
Inorgan	nic Anions by EPA 300/300.1	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]	[0]	[D]	[E]	Result [F]	[G]				
Chloride		697	246	924	92	246	917	89	1	90-110	20	X
Lab Batch ID:	3025725	QC- Sample ID:	560113	-004 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	08/22/2017	Date Prepared:	08/22/2	017	An	alyst: 1	MGO					
Reporting Units:	mg/kg		Ν	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	FE REC	OVERY	STUDY		
Inorgan	nic Anions by EPA 300/300.1	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample %R		Duplicate Spiked Sample	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	Added [B]	[C]	%K [D]	Added [E]	Result [F]	%K [G]	-70	-⁄0K	70KPD	
Chloride		14.2	246	279	108	246	277	107	1	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference RPD = 200*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

d by Arc	YELLOW – Lab copy		atory	Distribution: WHITE	20730826 CofC AR Form 08.27.2015
Date/Times -11/0-17 10:00	Date/Time:	Date/Time:	Date/Time: 8-15-17 /1600	Condition/Cooler Temp:	Shipping Tracking #:
Firm	Firm/Courier:	Firm/Courier.	Accortis	Sample Receipt:	Specily Turnaround Requirements: Steensheed TAT
Standure Mallund Smith	Signature:	Signature: V		I INIACI I NOT INTACT Signa	Cooler packed with ice (V)
Shawner Smith	Prinfed Name:	Printige Name:	Kyan Nanny	tody seal (V)	Xenco
y Laboratory Received By	Relinquished By	Received By	Relinquished By		Laboratory Infor
Temp: IR ID:R-8 CF:(0-6: -0.2°C) (6-23: +0.2°C) Corrected Temp: 2		Special QA/QC Instructions('/):			Special Instructions/Comments:
		\$			
Sample, Sample,	Kun S.)	StateA10-06 (4)
REMARKS		$\left \right $	-	Time Comp Grab	Stat. 110 (u)
G. Other: 8. 8 oz. Glass H. Other: 9. Other: 9. Other: 10. Other:			hlorides	MA BOO 42625 - 1701 MA BOO 42625 - 1701 Sample's Signature: Collection Type (*) Matrix	Project Named.ocation (City, State) HESS Transfer Sites Buickeye, NA Sample's Printed Name: Nyara Natura Sample ID
F. Other: 5. Encode 6. 2 oz. Glass 7. 4 oz. Glass	METHOD	PARAMETER ANALYSIS & ME		-	State
			# of Containers		iner
on Key:				- Fax Fax Fax - 953 - 4874	
Lab Work Order # S(00293	f Page <u>i</u> of <u>i</u>	LABORATORY ST FORM	CHAIN OF CUSTODY & LABORAT ANALYSIS REQUEST FORM	CHAI	DIS

Page 9 of 10

Final 1.000



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: Arcadis - Houston Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 08/16/2017 10:00:00 AM Temperature Measuring device used : R8 Work Order #: 560293 Comments Sample Receipt Checklist 1.2 #1 *Temperature of cooler(s)? #2 *Shipping container in good condition? Yes #3 *Samples received on ice? Yes #4 *Custody Seal present on shipping container/ cooler? N/A #5 *Custody Seals intact on shipping container/ cooler? N/A #6 Custody Seals intact on sample bottles? Yes #7 *Custody Seals Signed and dated? N/A #8 *Chain of Custody present? Yes #9 Sample instructions complete on Chain of Custody? Yes #10 Any missing/extra samples? No #11 Chain of Custody signed when relinguished/ received? Yes #12 Chain of Custody agrees with sample label(s)? Yes #13 Container label(s) legible and intact? Yes #14 Sample matrix/ properties agree with Chain of Custody? Yes #15 Samples in proper container/ bottle? Yes #16 Samples properly preserved? Yes #17 Sample container(s) intact? Yes #18 Sufficient sample amount for indicated test(s)? Yes #19 All samples received within hold time? Yes #20 Subcontract of sample(s)? No #21 VOC samples have zero headspace? N/A

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Date: 08/16/2017

Checklist completed by: Shawnee Smith Checklist reviewed by: Mark Moah Kelsey Brooks

Date: 08/16/2017



Form 3 - MS / MSD Recoveries

Project Name: HES Transfer Sites



Work Order # :	560293						Project ID):				
Lab Batch ID:	3025725	QC- Sample ID:	560112	-001 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	08/22/2017	Date Prepared:	08/22/2	017	An	alyst: N	MGO					
Reporting Units:	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	FE REC	OVERY	STUDY		
Inorgan	nic Anions by EPA 300/300.1	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]	[0]	[D]	[E]	Result [F]	[G]				
Chloride		697	246	924	92	246	917	89	1	90-110	20	X
Lab Batch ID:	3025725	QC- Sample ID:	560113	-004 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	08/22/2017	Date Prepared:	08/22/2	017	An	alyst: 1	MGO					
Reporting Units:	mg/kg		Ν	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	FE REC	OVERY	STUDY		
Inorgan	nic Anions by EPA 300/300.1	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample %R		Duplicate Spiked Sample	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	Added [B]	[C]	%K [D]	Added [E]	Result [F]	%R [G]	-70	-⁄0K	70KPD	
Chloride		14.2	246	279	108	246	277	107	1	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference RPD = 200*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

d by Arc	YELLOW – Lab copy		atory	Distribution: WHITE	20730826 CofC AR Form 08.27.2015
Date/Times -11/0-17 10:00	Date/Time:	Date/Time:	Date/Time: 8-15-17 /1600	Condition/Cooler Temp:	Shipping Tracking #:
Firm	Firm/Courier:	Firm/Courier.	Accortis	Sample Receipt:	Specily Turnaround Requirements: Steensheed TAT
Standure Mallund Smith	Signature:	Signature: V		I INIACI I NOT INTACT Signa	Cooler packed with ice (V)
Shawner Smith	Prinfed Name:	Printige Name:	Kyan Nanny	tody seal (V)	Xenco
y Laboratory Received By	Relinquished By	Received By	Relinquished By		Laboratory Infor
Temp: IR ID:R-8 CF:(0-6: -0.2°C) (6-23: +0.2°C) Corrected Temp: 2		Special QA/QC Instructions('/):			Special Instructions/Comments:
		\$			
Sample, Sample,	Kun S.)	StateA10-06 (4)
REMARKS		$\left \right $	-	Time Comp Grab	Stat. 110 (u)
G. Other: 8. 8 oz. Glass H. Other: 9. Other: 9. Other: 10. Other:			hlorides	MA BOO 42625 - 1701 MA BOO 42625 - 1701 Sample's Signature: Collection Type (*) Matrix	Project Named. Coastion (City, State) HESS Transfer Sites Buickeye, NA Sample's Printed Name: Nyara Natura Sample ID
F. Other: 5. Encode 6. 2 oz. Glass 7. 4 oz. Glass	METHOD	PARAMETER ANALYSIS & ME		-	State
			# of Containers		iner
on Key:				- Fax - 953-4874	
Lab Work Order #	f Page <u>i</u> of <u>i</u>	LABORATORY ST FORM	CHAIN OF CUSTODY & LABORAT ANALYSIS REQUEST FORM	CHAI	DIS

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Final 1.000



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: Arcadis - Houston Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 08/16/2017 10:00:00 AM Temperature Measuring device used : R8 Work Order #: 560293 Comments Sample Receipt Checklist 1.2 #1 *Temperature of cooler(s)? #2 *Shipping container in good condition? Yes #3 *Samples received on ice? Yes #4 *Custody Seal present on shipping container/ cooler? N/A #5 *Custody Seals intact on shipping container/ cooler? N/A #6 Custody Seals intact on sample bottles? Yes #7 *Custody Seals Signed and dated? N/A #8 *Chain of Custody present? Yes #9 Sample instructions complete on Chain of Custody? Yes #10 Any missing/extra samples? No #11 Chain of Custody signed when relinguished/ received? Yes #12 Chain of Custody agrees with sample label(s)? Yes #13 Container label(s) legible and intact? Yes #14 Sample matrix/ properties agree with Chain of Custody? Yes #15 Samples in proper container/ bottle? Yes #16 Samples properly preserved? Yes #17 Sample container(s) intact? Yes #18 Sufficient sample amount for indicated test(s)? Yes #19 All samples received within hold time? Yes #20 Subcontract of sample(s)? No #21 VOC samples have zero headspace? N/A

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Date: 08/16/2017

Checklist completed by: Shawnee Smith Checklist reviewed by: Mark Moah Kelsey Brooks

Date: 08/16/2017