Closure Report

Site Description								
Site Name:	Citation X Fed Com #001H							
Company:	COG Operating, LLC							
Legal Description:	U/L M, Section 8, T19S, R32E							
County:	Lea County, NM							
GPS Coordinates:	N 32.66973° W-103.79536°							

Release Data								
Date of Release:	Unknown							
Type of Release:	Produced water							
Source of Release:	Compromised flow line							
Volume of Release:	267 bbls							
Volume Recovered:	0 bbls							

Remediation Specifications										
Remediation Parameters:		itire leak area to a depth of 4 feet and placed a liner. Obtained confirmation sidewall samples. with clean soil.								
Remediation Activities:	07/13/2018 to 0	8/02/2018								
Plan Sent to OCD:	06/06/2018	Email from Cliff Brunson to Christina Hernandez								
OCD Approval of Plan:	OCD Approval of Plan: 07/03/2018 Email from Christina Hernandez to Cliff Brunson									
Plan Sent to BLM: 06/06/2018 Email from Cliff Brunson to Shelly Tucker										
BLM Approval of Plan:	07/11/2018	Email from Shelly Tucker to Cliff Brunson								

Supporting Documentation								
Initial C-141	Signed 12/07/2017							
Final C-141	Signed 08/13/2018							
Site Diagram	March 2018							
Groundwater Plot	450'							
TOPO Maps	March 2018							
Lab Summary	01/08/2018-01/09/2018, 03/20/2018, and 07/23/2018							
Lab Analysis	01/08/2018-01/09/2018, 03/20/2018, and 07/23/2018							
Correspondence	Request and approval of remediation plan via email							

Request for Closure

Based on the completion of the remediation plan, BBC International, Inc. requests closure approval from NMOCD.

Cliff Brunson, President, BBC International, Inc.

08/20/2018

District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV

State of New Mexico **Energy Minerals and Natural Resources**

Form C-141 Revised April 3, 2017

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

1220 S. St. Francis Dr., Santa Fe, NM 87505 **Release Notification and Corrective Action OPERATOR Final Report** Name of Company: COG Operating, LLC (OGRID# 229137) Contact: Robert McNeill Address: 600 West Illinois Avenue, Midland TX 79701 Telephone No.: 432-683-7443 Facility Name: Citation X Federal Com #001H Facility Type: Flowline Surface Owner: BLM Mineral Owner: Federal API No.: 30-025-39960 LOCATION OF RELEASE Unit Letter Section Range Feet from the North/South Line Township Feet from the East/West Line 19S 32E M Lea Latitude: 32.669795 Longitude: -103.795431 NAD83 NATURE OF RELEASE Type of Release: Produced Water Volume of Release: Volume Recovered: 267bbls 0bbls Source of Release: Flowline Date and Hour of Occurrence: Date and Hour of Discovery: Unknown 12/6/2017 3:00pm Was Immediate Notice Given? If YES, To Whom? Olivia Yu-NMOCD Shelly Tucker-BLM By Whom? Dakota Neel Date and Hour: 12/7/2017 7:56am Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ☒ No If a Watercourse was Impacted, Describe Fully.* RECEIVED By Olivia Yu at 7:41 am, Dec 08, 2017 Describe Cause of Problem and Remedial Action Taken.* The release was caused by a flowline rupture. Describe Area Affected and Cleanup Action Taken.* The release impacted the pasture 0.5mi west of the Citation X Federal Com #001H location. Concho will have the spill area evaluated for any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Shellon Alice Approved by Environmental Specialist: Printed Name: Sheldon L. Hitchcock 12/8/2017 Title: HSE Coordinator Approval Date: **Expiration Date:** E-mail Address: slhitchcock@concho.com

* Attach Additional Sheets If Necessary

Date: 12/7/2017

1RP-4890

Phone: 575-746-2010

Conditions of Approval:

see attached directive

nOY1734227772

pOY1734228543

Attached | Y

Operator/Responsible Party,

The OCD has received the form C-141 you provided on _12/7/2017_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number _1RP-4890__ has been assigned. Please refer to this case number in all future correspondence.

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete <u>division-approved corrective action</u> for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _1_ office in __Hobbs____ on or before _1/8/2018_. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- •Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.
- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.
- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold

OCD Environmental Bureau Chief 1220 South St. Francis Drive Santa Fe, New Mexico 87505 505-476-3465 jim.griswold@state.nm.us

Form C-141

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 District II District III
1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

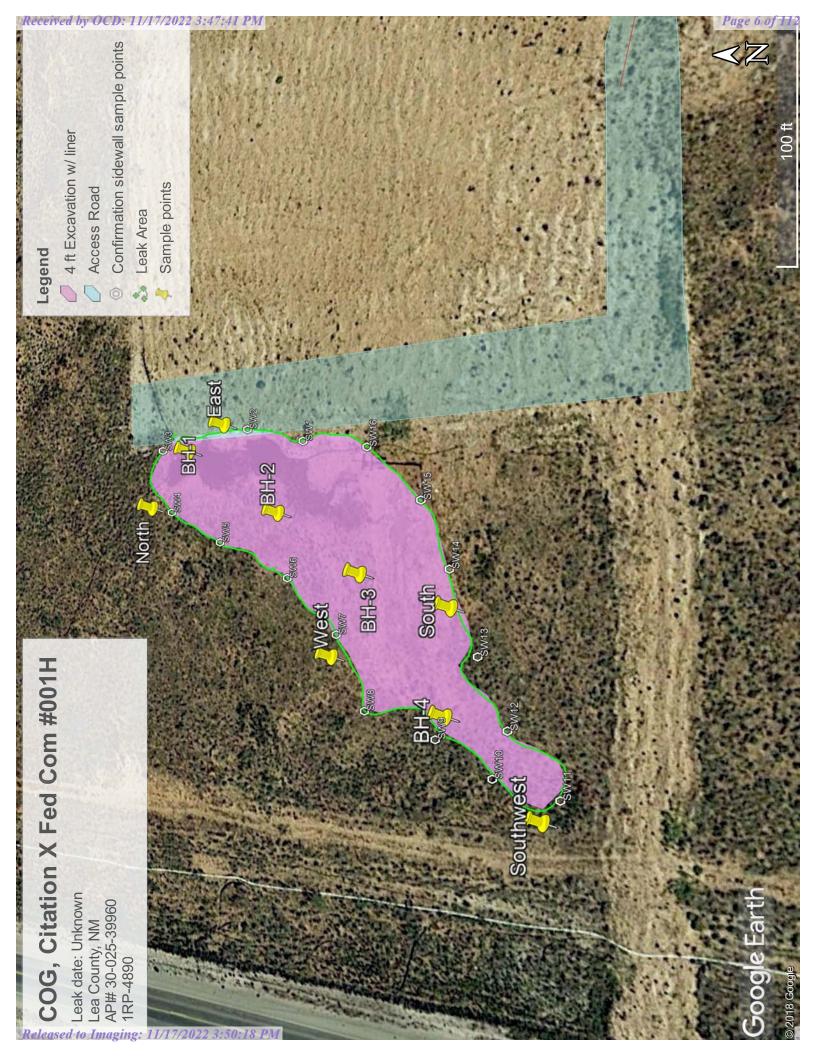
Revised April 3, 2017

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

			Rele	Release Notification and Corrective Action										
				70000 1 (001110		OPERA'				al Report	\boxtimes	Final Report		
Name of Co	mpany	COG Operat	ing LLC		(Contact Robert McNeill								
	500 West I	llinois Aven	ue; Midla	and, TX 79701	,	Telephone No. 432-683-7443								
Facility Nar	ne Citat	tion X Fede	ral Com	#001H]	Facility Type Flowline								
Surface Ow	ner BLN	Л		Mineral C)wner	Federal			API No	. 30-025	-3996	0		
				LOCA	ATION	N OF REI	LEASE							
Unit Letter	Section	Township	Range	Feet from the	North/	South Line	Feet from the	East/V	Vest Line	County				
M	8	19S	32E							Lea Count	y, NM			
			Latitı	ude <u>N 32.66973</u>	<u>°</u> L	ongitude <u>W</u>	/ -103.79536° N	NAD83						
				NAT	URE	OF RELI	EASE							
Type of Rele		iced water				Volume of					0 bbls			
Source of Re	lease Flo	wline				Date and H Unknown	lour of Occurrenc	e		Hour of Dise 17 @ 3:00 pr				
Was Immedia	ate Notice C		Yes	No Not Re	equired	If YES, To Olivia Yu,	Whom? NMOCD; Shelly	Tucker	, BLM					
By Whom?	Dakota Ne	eel				Date and H	Iour 12/07/2017	7 @ 7:5	6 am					
Was a Water	course Reac	hed?	Yes 🗵] No		If YES, Vo	lume Impacting t	he Wate	ercourse.					
If a Watercou	ırse was Im	pacted, Descri	ibe Fully.	*										
N/A														
Describe Cau	se of Proble	em and Remed	dial Action	n Taken.*										
The release v	vas caused b	y a flowline i	upture.											
			•											
Describe Are	a Affected a	and Cleanup A	Action Tak	ken.*										
				the Citation X Fee										
				ion was completed Tucker of the BI				an appr	oved by Cł	nristina Hern	andez	of NMOCD		
I hereby certi	fy that the i	nformation gi	ven above	e is true and comp	lete to th	ne best of my	knowledge and u	nderstar	nd that purs	suant to NMO	OCD r	ules and		
regulations a	ll operators	are required to	o report ar	nd/or file certain r	elease n	otifications a	nd perform correc	tive acti	ions for rel	eases which	may e	ndanger		
				ce of a C-141 report investigate and r										
				otance of a C-141										
federal, state.	or local lav	vs and/or regu	lations.				· OH GON	arr.	ATION	· ·		,		
							OIL CONS	<u>SER V</u>	ATION	DIVISIC	<u> </u>			
3	0000	6	11.1	11										
Signature:	Relie	ca H	aske	le		Approved by	Environmental S ₁	pecialist	::////)	. 1	Hall		
Signature.		A.	The state of the s					(1	Duttan	٦ 1	/(~~		
Printed Name: Rebecca Haskell								<u> </u>						
Title: Seni	or HSE Coo	ordinator				Approval Dat	e: 11/17/202	2]	Expiration	Date: N/A	١			
E-mail Addre	ess: RHas	kell@concho	.com			Conditions of	Approval:			Attached				
Date: August	13, 2018		Phor	ne: 432-683-74	43	n	one							

^{*} Attach Additional Sheets If Necessary



COG, Citation X Fed Com #001H

Sample points

BH1, N 32.66982 W-103.79540

BH2, N 32.66967 W-103.79551

BH3, N 32.66954 W-103.79560

BH4, N 32.66942 W-103.79582

NORTH, N 32.66989 W-103.79550

SOUTH, N 32.66941 W-103.79565

EAST, N 32.66976 W-103.79536

WEST, N 32.66959 W-103.79574

SOUTHWEST, N 32.66928 W-103.79596

Confirmation sample points

SW1, N 32.66965 W-103.79538

SW2, N 32.66974 W-103.79536

SW3, N 32.66989 W-103.79539

SW4, N 32.66988 W-103.79550

SW5, N 32.66979 W-103.79555

SW6, N 32.66967 W-103.79561

SW7, N 32.66959 W-103.79569

SW8, N 32.66955 W-103.79581

SW9, N 32.66945 W-103.79585

SW10, N 32.66937 W-103.79590

SW11, N 32.66928 W-103.79592

SW12, N 32.66934 W-103.79582

SW13, N 32.66939 W-103.79572

SW14, N 32.66943 W-103.79559

SW15, N 32.66947 W-103.79548

SW16, N 32.66955 W-103.79540

COG, Citation X Fed Com #001H U/L M, Section 8, T19S, R32E Groundwater: 450'





New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD

Sub-QQQbasin County 64 16 4 Sec Tws Rng Code

3 4 3 17 19S 32E

X 613368 3613646

Water DistanceDepthWellDepthWater Column

Average Depth to Water:

Minimum Depth:

Maximum Depth:

Record Count: 1

POD Number

CP 01656 POD1

<u>UTMNAD83</u> Radius Search (in meters):

Easting (X): 612998 Northing (Y): 3615294 **Radius: 1700**

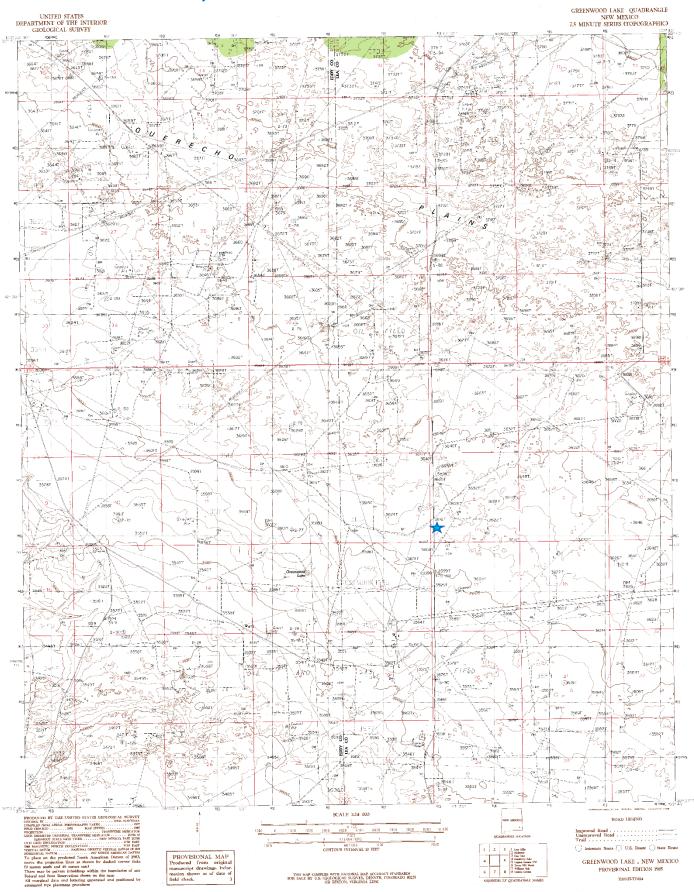
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

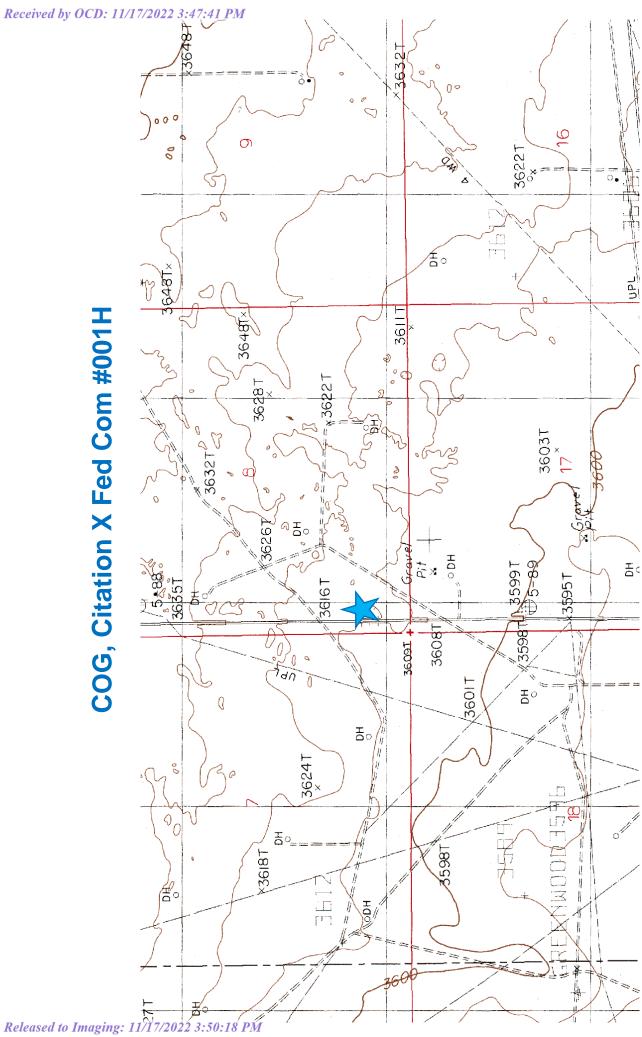
3/26/18 9:44 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

	Public Land Survey System (PLSS)										
•	Q64: 💙			Sec: 08 V Tws		Rng: 32E ✓					
0	State Plane Coordinate System - NAD27 O x: 0 ft Y: 0 ft Zone:										
0	State Plane Coordinate System - NAD83 X: 0 ft Y: 0 ft Zone:										
0	Degrees/Minutes/Seconds Longitude (X): Degrees: 0 ° Minutes: 0 ' Seconds: 0 "										
	Latitude (Y):	Deg	rees: 0 °	Minutes: 0	•	Seconds: 0 "					
			UTM -	NAD27							
0	Easting (X): 0 mtrs Northing (Y): 0 mtrs Zone:										
	SUBMIT										
	All Conversion Results are displayed as NAD 1983 UTM Zone 13										
	Easting (X):	612998.0	mtrs	Northing (Y):	3615294.0	mtrs					
	~~ Please keep screen open to copy UTM values for Reports. ~~										

COG, Citation X Fed Com #001H





Laboratory Analytical Results Summary Citation X Federal Com #001H

			BH1 @ 0'-	BH1 @	BH1 @	BH1 @	BH1 @	BH1 @	BH1 @	BH1 @	BH1 @	BH1 @	BH1 @	BH1 @	BH1 @	BH1 @	BH1 @	BH1 @	BH1 @	BH1 @	BH1 @
		Sample ID	1'	2'-3'	4'-5'	6'-7'	9'-10'	14'-15'	19'-20'	24'-25'	29'-30'	34'-35'	39'-40'	49'-50'	59'-60'	69'-70'	74'-75'	75'	80'	85'	90'
Analyte	Method	Date	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	3/20/18	3/20/18	3/20/18	3/20/18
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	EPA 8021B		16.2	29	0.0229	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Toluene	EPA 8021B		77.8	94.4	0.0295	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Ethylbenzene	EPA 8021B		56.1	56.9	0.00844	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
m,p,-Xylenes	EPA 8021B		87.4	87	0.0124	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
o-Xylene	EPA 8021B		31.9	32.3	0.00723	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylenes	EPA 8021B		119	119	0.0196	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total BTEX	EPA 8021B		269	300	0.0805	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chloride	EPA 300		4740	3540	8310	7980	12200	11800	11700	9880	10800	10600	13300	5210	2850	2560	2240	1210	3050	1510	<25.0
GRO	SW2015 Mod		3820	1980	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DRO	SW2015 Mod		6520	3130	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ORO	SW2015 Mod		1650	772	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total TPH	SW2015 Mod		12000	5880	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

		Sample ID	BH2 @ 0'- 1'	BH2 @ 2'-3'	BH2 @ 4'-5'	BH2 @ 6'-7'	BH2 @ 9'-10'	BH2 @ 14'-15'	BH2 @ 19'-20'	BH2 @ 24'-25'	BH2 @ 29'-30'	BH2 @ 34'-35'	BH2 @ 39'-40'	BH2 @ 49'-50'
Analyte	Method	Date	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18	1/8/18
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	EPA 8021B		<0.00998	<0.202	<0.00202	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Toluene	EPA 8021B		<0.00998	0.231	0.00349	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Ethylbenzene	EPA 8021B		0.0716	1.33	<0.00202	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
m,p,-Xylenes	EPA 8021B		0.168	4.34	<0.00403	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
o-Xylene	EPA 8021B		<0.00998	<0.202	<0.00202	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylenes	EPA 8021B		0.168	4.34	<0.00202	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total BTEX	EPA 8021B		0.24	5.9	0.00349	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chloride	EPA 300		4250	2830	10300	14900	11700	8220	6730	3290	3870	4530	2400	91.3
GRO	SW2015 Mod		140	1980	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DRO	SW2015 Mod		1940	14100	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ORO	SW2015 Mod		549	3160	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total TPH	SW2015 Mod		2630	19200	<15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

		Sample ID	BH3 @ 0'- 1'	BH3 @ 2'-3'	BH3 @ 4'-5'	BH3 @ 6'-7'	BH3 @ 9'-10'	BH3 @ 14'-15'	BH3 @ 19'-20'
Analyte	Method	Date	1/9/18	1/9/18	1/9/18	1/9/18	1/9/18	1/9/18	1/9/18
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	EPA 8021B		<0.0100	<0.00992	< 0.00336	n/a	n/a	n/a	n/a
Toluene	EPA 8021B		<0.0100	< 0.00992	< 0.00336	n/a	n/a	n/a	n/a
Ethylbenzene	EPA 8021B		<0.0100	<0.00992	< 0.00336	n/a	n/a	n/a	n/a
m,p,-Xylenes	EPA 8021B		<0.0200	<0.0198	< 0.00671	n/a	n/a	n/a	n/a
o-Xylene	EPA 8021B		<0.0100	<0.00992	< 0.00336	n/a	n/a	n/a	n/a
Total Xylenes	EPA 8021B		<0.0100	< 0.00992	< 0.00336	n/a	n/a	n/a	n/a
Total BTEX	EPA 8021B		<0.0100	< 0.00992	< 0.00336	n/a	n/a	n/a	n/a
Chloride	EPA 300		106	17.6	966	5630	4300	548	202
GRO	SW2015 Mod		108	24.2	<15.0	n/a	n/a	n/a	n/a
DRO	SW2015 Mod		3790	3760	<15.0	n/a	n/a	n/a	n/a
ORO	SW2015 Mod		1050	833	<15.0	n/a	n/a	n/a	n/a
Total TPH	SW2015 Mod		4950	4620	<15.0	n/a	n/a	n/a	n/a

		Sample ID	BH4 @ 0'- 1'	BH4 @ 2'-3'	BH4 @ 4'-5'	BH4 @ 6'-7'	BH4 @ 9'-10'	BH4 @ 14'-15'
Analyte	Method	Date	1/9/18	1/9/18	1/9/18	1/9/18	1/9/18	1/9/18
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	EPA 8021B		<0.00200	< 0.00201	0.00548	n/a	n/a	n/a
Toluene	EPA 8021B		<0.00200	0.00234	0.00364	n/a	n/a	n/a
Ethylbenzene	EPA 8021B		<0.00200	<0.00201	< 0.00201	n/a	n/a	n/a
m,p,-Xylenes	EPA 8021B		<0.00399	< 0.00402	< 0.00402	n/a	n/a	n/a
o-Xylene	EPA 8021B		<0.00200	<0.00201	< 0.00201	n/a	n/a	n/a
Total Xylenes	EPA 8021B		<0.00200	<0.00201	< 0.00201	n/a	n/a	n/a
Total BTEX	EPA 8021B		<0.00200	0.00234	0.00912	n/a	n/a	n/a
Chloride	EPA 300		301	845	799	401	86.4	112
GRO	SW2015 Mod		<15.0	<15.0	<15.0	n/a	n/a	n/a
DRO	SW2015 Mod		<15.0	<15.0	<15.0	n/a	n/a	n/a
ORO	SW2015 Mod		<15.0	<15.0	<15.0	n/a	n/a	n/a
Total TPH	SW2015 Mod		<15.0	<15.0	<15.0	n/a	n/a	n/a

	l		SWBH	SWBH @	SWBH @
		Sample ID	0'-1'	2'-3'	4'-5'
Analyte	Method	Date	1/9/18	1/9/18	1/9/18
			mg/kg	mg/kg	mg/kg
Benzene	EPA 8021B		0.00555	< 0.00199	<0.00201
Toluene	EPA 8021B		0.00317	< 0.00199	< 0.00201
Ethylbenzene	EPA 8021B		<0.00199	<0.00199	<0.00201
m,p,-Xylenes	EPA 8021B		<0.00398	<0.00398	< 0.00402
o-Xylene	EPA 8021B		<0.00199	<0.00199	< 0.00201
Total Xylenes	EPA 8021B		<0.00199	<0.00199	<0.00201
Total BTEX	EPA 8021B		0.00872	<0.00199	<0.00201
Chloride	EPA 300		37.1	168	<4.99
GRO	SW2015 Mod		<15.0	<15.0	<15.0
DRO	SW2015 Mod		<15.0	<15.0	<15.0
ORO	SW2015 Mod		<15.0	<15.0	<15.0
Total TPH	SW2015 Mod		<15.0	<15.0	<15.0

	Sample ID	NBH 0'-1'	NBH @ 2'-3'	NBH @ 4'-5'
Method	Date	1/9/18	1/9/18	1/9/18
		mg/kg	mg/kg	mg/kg
EPA 8021B		<0.00199	<0.00200	0.00372
EPA 8021B		<0.00199	<0.00200	0.00375
EPA 8021B		<0.00199	<0.00200	<0.00202
EPA 8021B		<0.00398	<0.00399	<0.00403
EPA 8021B		<0.00199	<0.00200	<0.00202
EPA 8021B		<0.00199	<0.00200	<0.00202
EPA 8021B		<0.00199	<0.00200	0.00747
EPA 300		27.7	117	37.1
SW2015 Mod		<15.0	<15.0	<15.0
SW2015 Mod		<15.0	52.3	<15.0
SW2015 Mod	,	<15.0	32.7	<15.0
SW2015 Mod		<15.0	85	<15.0
	EPA 8021B EPA 8021B EPA 8021B EPA 8021B EPA 8021B EPA 8021B EPA 8021B EPA 8021B EPA 300 SW2015 Mod SW2015 Mod SW2015 Mod	Method Date PA 8021B	Method Date 1/9/18 mg/kg mg/kg PA 8021B <0.00199 PA 8021B <0.00199 PA 8021B <0.00199 PA 8021B <0.00398 PA 8021B <0.00199 PA 8021B <0.00199 PA 8021B <0.00199 PA 300 27.7 SW2015 Mod <15.0 SW2015 Mod <15.0 SW2015 Mod <15.0	Sample ID

	Sample ID	WBH 0'-1'	WBH @ 2'-3'	WBH @ 4'-5'
Method	Date	1/9/18	1/9/18	1/9/18
		mg/kg	mg/kg	mg/kg
EPA 8021B		0.00363	<0.00198	<0.00202
EPA 8021B		0.00277	<0.00198	<0.00202
EPA 8021B		<0.00199	<0.00198	<0.00202
EPA 8021B		<0.00398	<0.00397	<0.00404
EPA 8021B		<0.00199	<0.00198	<0.00202
EPA 8021B		0.00199	<0.00198	<0.00202
EPA 8021B		0.0064	<0.00198	<0.00202
EPA 300		32.7	38	36.1
SW2015 Mod		<15.0	<15.0	<15.0
SW2015 Mod		<15.0	<15.0	<15.0
SW2015 Mod		<15.0	<15.0	<15.0
SW2015 Mod		<15.0	<15.0	<15.0
	EPA 8021B EPA 8021B EPA 8021B EPA 8021B EPA 8021B EPA 8021B EPA 8021B EPA 300 SW2015 Mod SW2015 Mod SW2015 Mod	Method Date EPA 8021B EPA 8021B	Method Date 1/9/18 EPA 8021B 0.00363 EPA 8021B 0.00277 EPA 8021B <0.00199 EPA 8021B 0.0064 EPA 300 32.7 SW2015 Mod <15.0 SW2015 Mod <15.0 SW2015 Mod <15.0	Method Date 1/9/18 1/9/18 EPA 8021B 0.00363 <0.00198 EPA 8021B 0.00277 <0.00198 EPA 8021B 0.00277 <0.00199 EPA 8021B <0.00199 <0.00198 EPA 8021B <0.00398 <0.00397 EPA 8021B <0.00199 <0.00198 EPA 8021B <0.00199 <0.00198 EPA 8021B <0.0064 <0.00198 EPA 8021B <0.0064 <0.00198 EPA 300 32.7 38 SW2015 Mod <15.0 <15.0 SW2015 Mod <15.0 <15.0 SW2015 Mod <15.0 <15.0

Laboratory Analytical Results Summary
Citation X Federal Com #001H

			SBH	SBH @	SBH @
		Sample ID	0'-1'	2'-3'	4'-5'
Analyte	Method	Date	1/9/18	1/9/18	1/9/18
			mg/kg	mg/kg	mg/kg
Benzene	EPA 8021B		<0.00201	<0.00199	<0.00198
Toluene	EPA 8021B		<0.00201	<0.00199	<0.00198
Ethylbenzene	EPA 8021B		<0.00201	<0.00199	<0.00198
m,p,-Xylenes	EPA 8021B		< 0.00402	<0.00398	< 0.00396
o-Xylene	EPA 8021B		< 0.00201	<0.00199	<0.00198
Total Xylenes	EPA 8021B		<0.00201	<0.00199	<0.00198
Total BTEX	EPA 8021B		< 0.00201	<0.00199	<0.00198
Chloride	EPA 300		184	149	8.34
GRO	SW2015 Mod		<15.0	<15.0	<15.0
DRO	SW2015 Mod		<15.0	<15.0	<15.0
ORO	SW2015 Mod		<15.0	<15.0	<15.0
Total TPH	SW2015 Mod		<15.0	<15.0	<15.0

		Sample ID	EBH 0'-1'	EBH @ 2'-3'	EBH @ 4'-5'
Analyte	Method	Date	1/9/18	1/9/18	1/9/18
			mg/kg	mg/kg	mg/kg
Benzene	EPA 8021B		<0.00201	<0.00199	<0.00199
Toluene	EPA 8021B		<0.00201	<0.00199	<0.00199
Ethylbenzene	EPA 8021B		<0.00201	<0.00199	<0.00199
m,p,-Xylenes	EPA 8021B		<0.00402	<0.00398	<0.00398
o-Xylene	EPA 8021B		<0.00201	<0.00199	<0.00199
Total Xylenes	EPA 8021B		<0.00201	<0.00199	<0.00199
Total BTEX	EPA 8021B		<0.00201	<0.00199	<0.00199
Chloride	EPA 300		46.3	141	39.8
GRO	SW2015 Mod		<15.0	<15.0	<15.0
DRO	SW2015 Mod		<15.0	<15.0	<15.0
ORO	SW2015 Mod		<15.0	<15.0	<15.0
Total TPH	SW2015 Mod		<15.0	<15.0	<15.0

Laboratory Analytical Results Summary Citation X Fed Com #001H (Unknown)

		Sample ID	SW1
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500CI-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	SW2
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		< 0.300
Chloride	SM4500CI-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	SW3
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		< 0.300
Chloride	SM4500CI-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	SW4
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500CI-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	SW5
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		< 0.300
Chloride	SM4500CI-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	SW6
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500CI-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	SW7
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		< 0.300
Chloride	SM4500CI-B		32
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	SW8
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		< 0.300
Chloride	SM4500CI-B		16
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	SW9
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		< 0.300
Chloride	SM4500CI-B		16
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	SW10
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		< 0.300
Chloride	SM4500CI-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	SW11
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		< 0.300
Chloride	SM4500CI-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	SW12
		Sample ID	34412
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		< 0.150
Total BTEX	BTEX 8021B		< 0.300
Chloride	SM4500CI-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	SW13
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		< 0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500CI-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	SW14
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500CI-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	SW15
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		< 0.300
Chloride	SM4500CI-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	SW16
Analyte	Method	Date	7/23/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		< 0.300
Chloride	SM4500CI-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Analytical Report 573366

for Tetra Tech- Midland

Project Manager: Ike Tavarez
Citation X Fed Com #1
212C-MD-01056.200
18-JAN-18

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco-Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)





18-JAN-18

Project Manager: **Ike Tavarez Tetra Tech- Midland**4000 N. Big Spring Suite 401
Midland, TX 79705

Reference: XENCO Report No(s): 573366

Citation X Fed Com #1

Project Address: Lea County, NM

Ike Tavarez:

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) 573366. 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. 573366 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,

Kelsey Brooks

Knus Hoah

Project Manager

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Sample Cross Reference 573366

Page 19 of 112

Tetra Tech- Midland, Midland, TX

Citation X Fed Com #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH-1 0-1	S	01-08-18 00:00		573366-001
BH-1 2-3	S	01-08-18 00:00		573366-002
BH-1 4-5	S	01-08-18 00:00		573366-003
BH-1 6-7	S	01-08-18 00:00		573366-004
BH-1 9-10	S	01-08-18 00:00		573366-005
BH-1 14-15	S	01-08-18 00:00		573366-006
BH-1 19-20	S	01-08-18 00:00		573366-007
BH-1 24-25	S	01-08-18 00:00		573366-008
BH-1 29-30	S	01-08-18 00:00		573366-009
BH-1 34-35	S	01-08-18 00:00		573366-010
BH-1 39-40	S	01-08-18 00:00		573366-011
BH-1 49-50	S	01-08-18 00:00		573366-012
BH-1 59-60	S	01-08-18 00:00		573366-013
BH-1 69-70	S	01-08-18 00:00		573366-014
BH-1 74-75	S	01-08-18 00:00		573366-015
BH-2 0-1	S	01-08-18 00:00		573366-016
BH-2 2-3	S	01-08-18 00:00		573366-017
BH-2 4-5	S	01-08-18 00:00		573366-018
BH-2 6-7	S	01-08-18 00:00		573366-019
BH-2 9-10	S	01-08-18 00:00		573366-020
BH-2 14-15	S	01-08-18 00:00		573366-021
BH-2 19-20	S	01-08-18 00:00		573366-022
BH-2 24-25	S	01-08-18 00:00		573366-023
BH-2 29-30	S	01-08-18 00:00		573366-024
BH-2 34-35	S	01-08-18 00:00		573366-025
BH-2 39-40	S	01-08-18 00:00		573366-026
BH-2 49-50	S	01-08-18 00:00		573366-027
BH-3 0-1	S	01-09-18 00:00		573366-030
BH-3 2-3	S	01-09-18 00:00		573366-031
BH-3 4-5	S	01-09-18 00:00		573366-032
BH-3 6-7	S	01-09-18 00:00		573366-033
BH-3 9-10	S	01-09-18 00:00		573366-034
BH-3 14-15	S	01-09-18 00:00		573366-035
BH-3 19-20	S	01-09-18 00:00		573366-036
BH-4 0-1	S	01-09-18 00:00		573366-037
BH-4 2-3	S	01-09-18 00:00		573366-038
BH-4 4-5	S	01-09-18 00:00		573366-039
BH-4 6-7	S	01-09-18 00:00		573366-040
BH-4 9-10	S	01-09-18 00:00		573366-041
BH-4 14-15	S	01-09-18 00:00		573366-042
Southwest 0-1 (Borehole)	S	01-09-18 00:00		573366-043
Southwest 2-3 (Borehole)	S	01-09-18 00:00		573366-044
Southwest 4-5 (Borehole)	S	01-09-18 00:00		573366-045



Sample Cross Reference 573366



Tetra Tech- Midland, Midland, TX

Citation X Fed Com #1

North 0-1 (Borehole)	S	01-09-18 00:00	573366-046
North 2-3 (Borehole)	S	01-09-18 00:00	573366-047
North 4-5 (Borehole)	S	01-09-18 00:00	573366-048
West 0-1 (Borehole)	S	01-09-18 00:00	573366-049
West 2-3 (Borehole)	S	01-09-18 00:00	573366-050
West 4-5 (Borehole)	S	01-09-18 00:00	573366-051
South 0-1 (Borehole)	S	01-09-18 00:00	573366-052
South 2-3 (Borehole)	S	01-09-18 00:00	573366-053
South 4-5 (Borehole)	S	01-09-18 00:00	573366-054
East 0-1 (Borehole)	S	01-09-18 00:00	573366-055
East 2-3 (Borehole)	S	01-09-18 00:00	573366-056
East 4-5 (Borehole)	S	01-09-18 00:00	573366-057
BH-2 59-60	S	01-08-18 00:00	Not Analyzed
BH-2 69-70	S	01-08-18 00:00	Not Analyzed

CASE NARRATIVE

Client Name: Tetra Tech- Midland Project Name: Citation X Fed Com #1

Project ID: 212C-MD-01056.200 Report Date: 18-JAN-18
Work Order Number(s): 572266

Work Order Number(s): 573366 Date Received: 01/11/2018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3038355 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3038360 BTEX by EPA 8021B

Lab Sample ID 573366-047 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 573366-001, -002, -047, -048, -049, -050, -051, -052, -053, -054, -055, -056.

The Laboratory Control Sample for m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3038367 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3038453 Chloride by EPA 300

Lab Sample ID 573366-042 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 573366-032, -033, -034, -035, -036, -037, -038, -039, -040, -041, -042, -043, -044, -045, -046, -047, -048, -049, -050, -051.

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

Batch: LBA-3038601 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 573366 Tetra Tech- Midland, Midland, TX

Project Name: Citation X Fed Com #1

Date Received in Lab: Thu Jan-11-18 04:14 pm Report Date: 18-JAN-18

Kelsey Brooks Project Manager:

TEX by EPA 8021B	SOIL SOIL 1 Jan-13-18 00:00 1 Jan-13-18 08:00 1 Jan-13-18 17:30 1 Jan-13-18 17:30 1 Jan-13-18 17:30 1 Jan-13-18 17:30 1 Jan-13-18 08:00 2	SOIL SOIL Jan-08-18 00:00 Jan-12-18 16:00 Jan-12-18 23:35 mg/kg RL 0 0.0295 0.00201 0 0.00984 0.00201 0 0.0124 0.00402	SOIL Jan-08-18 00:00	BH-1 9-10 SOIL Jan-08-18 00:00	BH-1 14-15 SOIL Jan-08-18 00:00
### Depth: Matrix: SOIL	SOIL Jan-08-18 00: Jan-13-18 08: Jan-13-18 17:: mg/kg 99 29:0 99 94.4 99 56.9 99 87:0	SOIL Jan-08-18 0 Jan-12-18 1 Jan-12-18 2 mg/kg 0.0229 0.0295	SOIL Jan-08-18 00:00	SOIL Jan-08-18 00:00	SOIL Jan-08-18 00:00
BTEX by EPA 8021B Extracted: Jan-08-18 00:00 Analyzed: Jan-13-18 17:49 Units/RL: mg/kg RL Form RC Analyzed: Jan-13-18 17:49 Analyzed: Jan-13-18 17:49 Chits/RL: mg/kg RL T7:8 0.499 nes 31:9 0.499 Analyzed: Jan-13-18 17:49 Analyzed: Jan-13-18 17:49 Cone Analyzed: Jan-13-18 17:49 Analyzed: Jan-13-18 17:49 Analyzed: Jan-13-	SOIL Jan-08-18 00: Jan-13-18 17:: L mg/kg 99 29:0 99 94:4 99 56:9 98 87:0	SOIL Jan-08-18 0 Jan-12-18 1 Jan-12-18 2 mg/kg 0.0229 0.0295 0.00844	SOIL Jan-08-18 00:00	SOIL Jan-08-18 00:00	SOIL Jan-08-18 00:00
BTEX by EPA 8021B Extracted: Jan-08-18 00:00 Analyzed: Jan-13-18 08:00 Units/RL: mg/kg RL Figure RL RL Total RR RL Total RR RR Total	Jan-08-18 00: Jan-13-18 08: Jan-13-18 17: mg/kg 99 29:0 99 94:4 99 56:9 98 87:0 99 32:3	Jan-08-18 0 Jan-12-18 1 Jan-12-18 2 mg/kg 0.0229 0.0295 0.00844	Jan-08-18 00:00	Jan-08-18 00:00	Jan-08-18 00:00
BTEX by EPA 8021B Extracted: Jan-13-18 08:00 Analyzed: Jan-13-18 17:49 Units/RL: mg/kg RL 16.2 0.499 177.8 0.499 188 199 199 199 199 190	Jan-13-18 08: L mg/kg 99 29:0 99 94.4 99 56.9 98 87:0	Jan-12-18 1 Jan-12-18 2 mg/kg 0.0229 0.00844 0.0124			
Analyzed: Jan-13-18 17:49 Units/RL: mg/kg RL 16.2 0.499 cene 56.1 0.499 ess 87.4 0.998 10.499 10.499	Jan-13-18 17:: mg/kg 99 29:0 99 94:4 99 56:9 98 87:0 99 32:3	Jan-12-18 2 mg/kg 0.0229 0.00844 0.0124			
Units/RL: mg/kg RL mg 16.2 0.499 77.8 0.499 cene 56.1 0.499 87.4 0.998 nes 87.4 0.998 87.4 0.998	29.0 29.0 94.4 56.9 87.0 32.3	mg/kg 0.0229 0.0295 0.00844 0.0124			
icine 16.2 0.499 77.8 0.499 nes 87.4 0.998 11.9 0.499	29.0 94.4 56.9 87.0 32.3	0.0229 0.0295 0.00844 0.0124			
rene 56.1 0.499 nes 87.4 0.998 31.9 0.499	94.4 56.9 87.0 32.3	0.0295			
sene 56.1 0.499 nes 87.4 0.998 31.9 0.499	56.9 87.0 32.3	0.00844			
87.4 0.998 31.9 0.499	87.0 32.3	0.0124			
31.9	32.3				
011		0.00723 0.00201			
10tal Aylenes	0.499 1119 0.500	0.0196 0.00201			
Total BTEX 269 0.499	0.499 300 0.500	0 0.0805 0.00201			
Chloride by EPA 300 Extracted: Jan-12-18 15:00 Jan-	00 Jan-12-18 15:00	Jan-12-18 15:00	Jan-12-18 15:00	Jan-12-18 15:00	Jan-12-18 15:00
Analyzed: Jan-15-18 20:46 Jan-	46 Jan-15-18 20:53	Jan-15-18 21:00	Jan-15-18 21:07	Jan-15-18 21:27	Jan-15-18 21:34
Units/RL: mg/kg RL mg	RL mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride 4740 25.0	25.0 3540 24.7	7 8310 49.2	7980 49.0	12200 49.3	11800 49.7
TPH by SW8015 Mod Extracted: Jan-12-18 10:00 Jan-	Jan-12-18 10:00	Jan-12-18 10:00			
Analyzed: Jan-13-18 08:09 Jan-	Jan-13-18 09:32	Jan-13-18 07:29			
Units/RL: mg/kg RL mg	RL mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO) 3820 75.0	75.0 1980 15.0	0 <15.0 15.0			
Diesel Range Organics (DRO) 6520 75.0	75.0 3130 15.0	0 <15.0 15.0			
Oil Range Hydrocarbons (ORO)	75.0 772 15.0	0 <15.0 15.0			
Total TPH 12000 75.0	75.0 5880 15.0	0 <15.0 15.0			

Kelsey Brooks Project Manager

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Page 6 of 51

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Lea County,NM Ike Tavarez

212C-MD-01056.200

XENCO

Certificate of Analysis Summary 573366

Tetra Tech- Midland, Midland, TX

Project Name: Citation X Fed Com #1

212C-MD-01056.200

Project Id: Contact:

Lea County,NM Ike Tavarez

Project Location:

XENCO

Date Received in Lab: Thu Jan-11-18 04:14 pm Report Date: 18-JAN-18

Project Manager: Kelsey Brooks

Analysis Requested Field Id. BH-1 19-20 BH-1 24-25 BH-1 29-30 BH-1 34-35 BH-1 39-40 BH-1 39-40 Analysis Requested Depth: SOIL <		Lab Id:	573366-007	573366-008	573366-009	573366-010	573366-011	573366-012
Antatyols Nequested Depth: SOIL	A walness Dogwood	Field Id:	BH-1 19-20	BH-1 24-25	BH-1 29-30	BH-1 34-35	BH-1 39-40	BH-1 49-50
Chloride by EPA 300 Extracted: Jan-12-18 15:00 Jan-12-18 1	Analysis Kequesieu	Depth:						
Chloride by EPA 300 Extracted: Jan-08-18 00:00 Jan-12-18 15:00 Jan-12-18 15:00 Jan-12-18 15:00 Jan-12-18 15:00 Jan-12-18 15:00 Jan-12-18 15:00 Jan-15-18 20:02 Jan-15-18 20:02 Jan-15-18 20:02 Jan-15-18 20:02 Jan-15-18 20:02 Jan-15-18 20:02 Jan-15-18 20:09 Jan-15-18 2		Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Chloride by EPA 300 Extracted: Jan-12-18 15:00 Jan-12-18 20:02 Jan-12-18 15:00 Jan-12-18 20:02 Jan-12-18 2		Sampled:	Jan-08-18 00:00					
Analyzed: Jan-15-18 21:41 Jan-15-18 21:48 Jan-15-18 21:55 Jan-15-18 22:02 Jan-15-18 22:09 Units/RL: mg/kg RL mg/kg RL mg/kg RL mg/kg RL 11700 50.0 9880 49.7 10800 49.8 10600 49.8 13300 98.0	Chloride by EPA 300	Extracted:	Jan-12-18 15:00	Jan-15-18 14:30				
Units/RL: mg/kg RL mg		Analyzed:	Jan-15-18 21:41	Jan-15-18 21:48	Jan-15-18 21:55	Jan-15-18 22:02	Jan-15-18 22:09	Jan-16-18 01:11
11700 50.0 9880 49.7 10800 49.8 10600 49.8 13300 98.0		Units/RL:	mg/kg RL	mg/kg RL		mg/kg RL		mg/kg RL
	Chloride							5210 49.8

Kelsey Brooks Project Manager

Page 7 of 51

Final 1.000

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

Certificate of Analysis Summary 573366 Tetra Tech- Midland, Midland, TX

212C-MD-01056.200

Project Id: Contact:

Lea County,NM Ike Tavarez

Project Location:

XENCO

Project Name: Citation X Fed Com #1



Date Received in Lab: Thu Jan-11-18 04:14 pm Report Date: 18-JAN-18

Kelsey Brooks Project Manager:

	Lab Id:	573366-013	573366-014	573366-015	573366-016	573366-017	573366-018	
A real ways Downson	Field Id:	BH-1 59-60	BH-1 69-70	BH-1 74-75	BH-2 0-1	BH-2 2-3	BH-2 4-5	
Anatysts Nequesied	Depth:							
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jan-08-18 00:00	Jan-08-18 00:00	Jan-08-18 00:00	Jan-08-18 00:00	Jan-08-18 00:00	Jan-08-18 00:00	
BTEX by EPA 8021B	Extracted:				Jan-17-18 09:00	Jan-17-18 09:00	Jan-12-18 16:00	
	Analyzed:				Jan-17-18 16:39	Jan-17-18 17:17	Jan-12-18 20:23	
	Units/RL:				mg/kg RL	mg/kg RL	mg/kg F	RL
Benzene					<0.00998 0.00998	<0.202 0.202	<0.00202 0.00202	202
Toluene					<0.00998 0.00998	0.231 0.202	0.00349 0.00202	202
Ethylbenzene					0.0716 0.00998	1.33 0.202	<0.00202 0.00202	202
m,p-Xylenes					0.168 0.0200	4.34 0.403	<0.00403 0.00403	403
o-Xylene					<0.00998 0.00998	<0.202 0.202	<0.00202 0.00202	202
Total Xylenes					0.168 0.00998	4.34 0.202	<0.00202 0.00202	202
Total BTEX					0.240 0.00998	5.90 0.202	0.00349 0.00202	202
Chloride by EPA 300	Extracted:	Jan-15-18 14:30	Jan-15-18 14:30	Jan-15-18 14:30	Jan-15-18 14:30	Jan-15-18 14:30	Jan-15-18 14:30	
	Analyzed:	Jan-16-18 01:18	Jan-16-18 01:25	Jan-16-18 01:32	Jan-16-18 01:53	Jan-16-18 02:00	Jan-16-18 02:07	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg F	RL
Chloride		2850 24.9	2560 24.6	2240 24.5	4250 24.7	2830 24.7	66 00001	99.4
TPH by SW8015 Mod	Extracted:				Jan-12-18 10:00	Jan-12-18 10:00	Jan-12-18 10:00	
	Analyzed:				Jan-13-18 09:11	Jan-13-18 08:30	Jan-13-18 07:49	
	Units/RL:				mg/kg RL	mg/kg RL	mg/kg F	RL
Gasoline Range Hydrocarbons (GRO)					140 15.0	1980 150	<15.0 13	15.0
Diesel Range Organics (DRO)					1940 15.0	14100 150	<15.0 13	15.0
Oil Range Hydrocarbons (ORO)					549 15.0	3160 150	<15.0 13	15.0
Total TPH					2630 15.0	19200 150	<15.0 13	15.0
								Ì

Kelsey Brooks Project Manager

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Page 8 of 51

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Certificate of Analysis Summary 573366

Tetra Tech- Midland, Midland, TX

Project Name: Citation X Fed Com #1

212C-MD-01056.200

Project Id: Contact:

Lea County,NM Ike Tavarez

Project Location:

XENCO

Date Received in Lab: Thu Jan-11-18 04:14 pm Report Date: 18-JAN-18

Project Manager: Kelsey Brooks

	Lab Id:	573366-019	573366-020	573366-021	573366-022	573366-023	573366-024
Amaluaia Dominated	Field Id:	BH-2 6-7	BH-2 9-10	BH-2 14-15	BH-2 19-20	BH-2 24-25	BH-2 29-30
Analysis Kequesiea	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jan-08-18 00:00	Jan-08-18 00:00	Jan-08-18 00:00	Jan-08-18 00:00	Jan-08-18 00:00	Jan-08-18 00:00
Chloride by EPA 300	Extracted: Jan-15-18	Jan-15-18 14:30	Jan-15-18 14:30	Jan-15-18 14:30	Jan-15-18 14:30	Jan-15-18 14:30	Jan-15-18 14:30
	Analyzed:	Analyzed: Jan-16-18 02:13	Jan-16-18 02:20	Jan-16-18 02:48	Jan-16-18 02:55	Jan-16-18 03:16	Jan-16-18 03:23
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		14900 99.0	11700 100	8220 49.5	6730 49.3	3290 25.0	3870 24.6

Kelsey Brooks Project Manager

Page 9 of 51

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Certificate of Analysis Summary 573366

Tetra Tech- Midland, Midland, TX

Project Name: Citation X Fed Com #1

212C-MD-01056.200

Project Id: Contact:

Lea County,NM Ike Tavarez

Project Location:

XENCO

Date Received in Lab: Thu Jan-11-18 04:14 pm Report Date: 18-JAN-18

Project Manager: Kelsey Brooks

Aμαθysis Requested Popula: SOIL Jan-17-18 19.80 Jan-17-18 19.80 Jan-17-18 19.10 Jan-17-18 19.10 Jan-17-18 19.11 Jan-17-18 19.12 Jan-17-18 19.20 Jan-17-18 19.30 Jan-17-18 19.30		Lab Id:	573366-025	573366-026	573366-027	573366-030	573366-031	573366-032	
Nationaly Deep Part SOIL Soil	A malucia Dogunated	Field Id:	BH-2 34-35	BH-2 39-40	BH-2 49-50	BH-3 0-1	BH-3 2-3	BH-3 4-5	
Soll	Analysis Requested	Depth:							
BTEX by EPA 8021B Sampled: Jan-08-18 00:00 Jan-17-18 10:00 Jan-17-18 10:0		Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
BTEX by EPA 8021B Extracted: Analyzed: Analyzed: Jan-17-18 16:58 Jan-17-18 16:58 Jan-17-18 16:58 Jan-17-18 13:11 Jan-17-18 13:12		Sampled:	Jan-08-18 00:00	Jan-08-18 00:00	Jan-08-18 00:00	Jan-09-18 00:00	Jan-09-18 00:00	Jan-09-18 00:00	0
Drinc/RL. Professional Prof	BTEX by EPA 8021B	Extracted:				Jan-17-18 09:00	Jan-17-18 09:00	Jan-15-18 11:00	0
Duits/RE Puits/RE Puits/RE		Analyzed:				Jan-17-18 16:58	Jan-17-18 13:11	Jan-15-18 17:16	9
Chloride by EPA 300 Chloride by EPA 300		Units/RL:							RL
Chloride by EPA 300 Extracted; Jan-15-18 14:30 Analyzed; Analyzed; Jan-16-18 03:30 Analyzed; Analy	Benzene								0.00336
Chiecation Chi	Toluene								0.00336
Chicago Continue	Ethylbenzene								0.00336
Authoration	m,p-Xylenes								0.00671
Chloride by EPA 300 Extracted: Jan-15-18 14:30 Jan-15-18 14:	o-Xylene								0.00336
Chloride by EPA 300 Extracted: Jan-15-18 14:30 Jan-16-18 03:37 Jan-16-18 03:04 Jan-16-18 03:07 Jan-16-18 16:00 Jan-16-18 16:	Total Xylenes								0.00336
Chloride by EPA 300 Extracted: Jan-15-18 14:30 Jan-16-18 03:44 Jan-16-18 00:50 Jan-16-18 03:27 Jan-16-18 03:44 Jan-16-18 00:50 Jan-16-18 02:27 TPH by SW8015 Mod Extracted: 4530 24.8 2400 25.0 91.3 4.93 106 4.93 17.6 4.99 TPH by SW8015 Mod Extracted: Analyzed:	Total BTEX							<0.00336 0.00336	0336
TPH by SW8015 Mod Extracted: Jan-16-18 03:37 Jan-16-18 03:37 Jan-16-18 03:37 Jan-16-18 03:34 Jan-16-18 03:34 Jan-16-18 03:34 Jan-16-18 03:34 Jan-16-18 03:34 Jan-16-18 03:34 Jan-16-18 03:37 Jan-16-18 03:37 RL mg/kg RL <th>Chloride by EPA 300</th> <th>Extracted:</th> <th>Jan-15-18 14:30</th> <th>Jan-15-18 14:30</th> <th>Jan-15-18 14:30</th> <th>Jan-15-18 14:30</th> <th>Jan-15-18 14:30</th> <th>Jan-15-18 17:00</th> <th>0</th>	Chloride by EPA 300	Extracted:	Jan-15-18 14:30	Jan-15-18 17:00	0				
TPH by SW8015 Mod Extracted: RL mg/kg RL mg/kg RL mg/kg RL mg/kg RL TPH by SW8015 Mod Extracted: 4530 24.8 2400 25.0 91.3 4.93 106 4.93 17.6 4.99 TPH by SW8015 Mod Extracted: Analyzed: Analyzed		Analyzed:	Jan-16-18 03:30	Jan-16-18 03:37	Jan-16-18 03:44	Jan-16-18 00:50	Jan-16-18 02:27	Jan-16-18 04:40	G
TPH by SW8015 Mod Extracted: 4530 24.6 24.0 25.0 91.3 4.93 106 4.93 17.6 4.99 TPH by SW8015 Mod Analyzed: Analyzed: Analyzed: Jan-13-18 08:50 Jan-13-18 08:50 Jan-11-18 11:47 Range Hydrocarbons (GRO) Lonits/RL: Resolution of the construction of t		Units/RL:							RL
TPH by SW8015 Mod Extracted: Jan-12-18 10:00 Jan-16-18 16:00 Jan-16-18 16:00 Jan-16-18 16:00 Jan-17-18 11:47 Lan-13-18 08:50 Jan-17-18 11:47 Langkg RL mg/kg RL mg/kg RL mg/kg RL mg/kg RL 15:0	Chloride								4.90
Analyzed: Analyzed: Jan-13-18 08:50 Jan-17-18 11:47 ange Hydrocarbons (GRO) Ing/kg RL mg/kg RL sige Organics (DRO) 3790 75.0 3760 15.0 Hydrocarbons (ORO) 4950 75.0 4620 15.0	TPH by SW8015 Mod	Extracted:				Jan-12-18 10:00	Jan-16-18 16:00	Jan-12-18 10:00	0
Range Hydrocarbons (GRO) Units/RL: Profession of Manage Hydrocarbons (GRO) Profession of Ma		Analyzed:				Jan-13-18 08:50	Jan-17-18 11:47	Jan-13-18 10:35	2
Range Hydrocarbons (GRO) Lange Hydrocarbons (GRO) 108 75.0 24.2 15.0 Reg Organics (DRO) 3790 75.0 3760 15.0 Hydrocarbons (ORO) 4950 75.0 4620 15.0		Units/RL:							RL
Rydrocarbons (ORO) Rydroca	Gasoline Range Hydrocarbons (GRO)								15.0
Hydrocarbons (ORO) Hydrocarbons (ORO) R33 15.0 833 15.0 8	Diesel Range Organics (DRO)								15.0
4950 75.0 4620 15.0	Oil Range Hydrocarbons (ORO)								15.0
	Total TPH					4950 75.0	4620 15.0	<15.0	15.0

Kelsey Brooks

Project Manager

Final 1.000

Page 10 of 51

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Certificate of Analysis Summary 573366 Tetra Tech- Midland, Midland, TX

Project Name: Citation X Fed Com #1

212C-MD-01056.200

Project Id: Contact:

Lea County,NM Ike Tavarez

Project Location:

XENCO



Date Received in Lab: Thu Jan-11-18 04:14 pm Report Date: 18-JAN-18

Kelsey Brooks Project Manager:

	Lab Id:	573366-033	573366-034	573366-035	573366-036	573366-037	573366-038
America Dominato	Field Id:	BH-3 6-7	BH-3 9-10	BH-3 14-15	BH-3 19-20	BH-4 0-1	BH-4 2-3
paisanbay sylunist	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jan-09-18 00:00	Jan-09-18 00:00				
BTEX by EPA 8021B	Extracted:	-				Jan-12-18 16:00	Jan-12-18 16:00
	Analyzed:					Jan-13-18 00:11	Jan-13-18 00:31
	Units/RL:					mg/kg RL	mg/kg RL
Benzene						<0.00200 0.00200	<0.00201 0.00201
Toluene						<0.00200 0.00200	0.00234 0.00201
Ethylbenzene						<0.00200 0.00200	<0.00201 0.00201
m,p-Xylenes						<0.00399 0.00399	<0.00402 0.00402
o-Xylene						<0.00200 0.00200	<0.00201 0.00201
Total Xylenes						<0.00200 0.00200	<0.00201 0.00201
Total BTEX						<0.00200 0.00200	0.00234 0.00201
Chloride by EPA 300	Extracted:	Jan-15-18 17:00	Jan-15-18 17:00				
	Analyzed:	Jan-16-18 05:01	Jan-16-18 05:08	Jan-16-18 05:15	Jan-16-18 05:22	Jan-16-18 05:43	Jan-16-18 05:50
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		5630 49.3	4300 24.6	548 4.90	202 4.91	301 4.92	845 4.96
TPH by SW8015 Mod	Extracted:					Jan-12-18 10:00	Jan-12-18 10:00
	Analyzed:					Jan-13-18 11:16	Jan-13-18 11:36
	Units/RL:					mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)						<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)						<15.0 15.0	<15.0 15.0
Oil Range Hydrocarbons (ORO)						<15.0 15.0	<15.0 15.0
Total TPH						<15.0 15.0	<15.0 15.0
		_					

Kelsey Brooks Project Manager

Page 11 of 51

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Certificate of Analysis Summary 573366

Tetra Tech- Midland, Midland, TX

Project Name: Citation X Fed Com #1

212C-MD-01056.200

Project Id: Contact:

Lea County,NM Ike Tavarez

Project Location:

XENCO

Date Received in Lab: Thu Jan-11-18 04:14 pm Report Date: 18-JAN-18

Project Manager: Kelsey Brooks

	Lab Id:	573366-039	573366-040	573366-041	573366-042	573366-043	573366-044	
Analysis Pognostod	Field Id:	BH-4 4-5	BH-4 6-7	BH-4 9-10	BH-4 14-15	Southwest 0-1 (Borehole)	Southwest 2-3 (Borehole)	ehole)
Analysis requesieu	Depth:							
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jan-09-18 00:00	Jan-09-18 00:00	Jan-09-18 00:00	Jan-09-18 00:00	Jan-09-18 00:00	Jan-09-18 00:00	00
BTEX by EPA 8021B	Extracted:	Jan-12-18 16:00				Jan-12-18 16:00	Jan-12-18 16:00	0
	Analyzed:	Jan-13-18 00:50				Jan-13-18 01:09	Jan-13-18 01:28	
	Units/RL:	mg/kg RL				mg/kg RL	mg/kg	RL
Benzene		0.00548 0.00201				0.00555 0.00199	>0.00199 0.0	0.00199
Toluene		0.00364 0.00201				0.00317 0.00199	>0.00199 0.0	0.00199
Ethylbenzene		<0.00201 0.00201				<0.00199 0.00199	>0.00199 0.0	0.00199
m,p-Xylenes		<0.00402 0.00402				<0.00398 0.00398	>0.00398 0.0	0.00398
o-Xylene		<0.00201 0.00201				<0.00199 0.00199	<0.00199 0.0	0.00199
Total Xylenes		<0.00201 0.00201				<0.00199 0.00199	>0.00199 0.0	0.00199
Total BTEX		0.00912 0.00201				0.00872 0.00199	<0.00199 0.00199	00199
Chloride by EPA 300	Extracted:	Jan-15-18 17:00	Jan-15-18 17:00	Jan-15-18 17:00	Jan-15-18 17:00	Jan-15-18 17:00	Jan-15-18 17:00	00
	Analyzed:	Jan-16-18 05:57	Jan-16-18 06:04	Jan-16-18 06:11	Jan-16-18 06:18	Jan-16-18 06:39	Jan-16-18 06:46	91
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg	RL
Chloride		799 4.90	401 4.94	86.4 4.99	112 4.98	37.1 4.93	168	4.94
TPH by SW8015 Mod	Extracted:	Jan-12-18 10:00				Jan-12-18 10:00	Jan-12-18 10:00	00
	Analyzed:	Jan-13-18 11:57				Jan-13-18 12:19	Jan-13-18 12:40	
	Units/RL:	mg/kg RL				mg/kg RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0				<15.0 15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0 15.0				<15.0 15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0 15.0				<15.0 15.0	<15.0	15.0
Total TPH		<15.0 15.0				<15.0 15.0	<15.0	15.0
		-	-					2

Kelsey Brooks Project Manager

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Page 12 of 51

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Released to Imaging: 11/17/2022 3:50:18 PM

Certificate of Analysis Summary 573366

Tetra Tech- Midland, Midland, TX

Project Name: Citation X Fed Com #1

212C-MD-01056.200

Project Id: Contact:

Lea County,NM Ike Tavarez

Project Location:

XENCO



Date Received in Lab: Thu Jan-11-18 04:14 pm Report Date: 18-JAN-18

Kelsey Brooks Project Manager:

Analysis Requested Field III: Southwest 4.5 (Bordehole) Nonth 0-1 (Bordehole) Nonth 0-2 (Bordehole) Nonth 0-2 (Bordehole) Nonth 4.5 (Bordehole) Nonth 4.5 (Bordehole) Nonth 4.5 (Bordehole) Nonth 2.5 (Bordehole) Nonth 4.5 (Bordehole		Lab Id:	573366-045	573366-046	573366-047	573366-048	573366-049	573366-050	
SOIL	Amalucia Dominated	Field Id:	Southwest 4-5 (Borehole)	North 0-1 (Borehole)	North 2-3 (Borehole)	North 4-5 (Borehole)	West 0-1 (Borehole)	West 2-3 (Borehole)	le)
8021B Sampled: SOIL	Analysis Nequested	Depth:							
8021B Extracted: Jan-09-18 00:00 Jan-13-18 10:00		Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
8021B Extracted: Jan-12-18 16:00 Jan-15-18 11:00 Jan-13-18 08:00 Jan-13-18 08:00 Analyzed: Jan-13-18 01:47 Jan-15-18 11:00 Jan-13-18 11:09 Jan-13-18 11:09 Jan-13-18 11:09 Chits/RL: mg/kg RL mg/kg RL mg/kg RL Analyzed: choozol choozol choozol choozol choozol choozol Analyzed: Jan-15-18 17:00 Jan-15-18 17:00 Jan-15-18 17:00 Jan-15-18 17:00 Jan-15-18 17:00 Analyzed: Jan-16-18 07:07 Jan-17-18 10:00 <t< th=""><th></th><th>Sampled:</th><th>Jan-09-18 00:00</th><th>Jan-09-18 00:00</th><th>Jan-09-18 00:00</th><th>Jan-09-18 00:00</th><th>Jan-09-18 00:00</th><th>Jan-09-18 00:00</th><th>0</th></t<>		Sampled:	Jan-09-18 00:00	Jan-09-18 00:00	Jan-09-18 00:00	Jan-09-18 00:00	Jan-09-18 00:00	Jan-09-18 00:00	0
Analyzed: Jan-13-18 01:47 Jan-15-18 17:35 Jan-13-18 11:09 Jan-13-18 11:47 Cuits/RL: mg/kg RL mg/kg RL mg/kg RL mg/kg RL <th>BTEX by EPA 8021B</th> <th>Extracted:</th> <th></th> <th>Jan-15-18 11:00</th> <th>Jan-13-18 08:00</th> <th>Jan-13-18 08:00</th> <th>Jan-13-18 08:00</th> <th>Jan-13-18 08:00</th> <th>0</th>	BTEX by EPA 8021B	Extracted:		Jan-15-18 11:00	Jan-13-18 08:00	Jan-13-18 08:00	Jan-13-18 08:00	Jan-13-18 08:00	0
PA 300 Extracted: Injus/RL: RL mg/kg RL RL mg/kg		Analyzed:	Jan-13-18 01:47	Jan-15-18 17:35	Jan-13-18 11:09	Jan-13-18 11:47	Jan-13-18 12:06	Jan-13-18 12:25	5
Concorrection Concorrectio		Units/RL:					mg/kg RL	mg/kg	RL
PA 300 Extracted: Jan-15-18 17:00 Jan-15-18 17:00 Jan-15-18 13:05 A-050 0.0020 0.00200 0.00202	Benzene						0.00363 0.00199	<0.00198 0.0	0.00198
PA 300 Extracted: Jan-15-18 17:00 Jan-15-18 13:25 Audyzed: Jan-15-18 13:02 Jan-15-18 13:02 <t< th=""><th>Toluene</th><th></th><th></th><th></th><th></th><th></th><th>0.00277 0.00199</th><th><0.00198 0.0</th><th>0.00198</th></t<>	Toluene						0.00277 0.00199	<0.00198 0.0	0.00198
PA 300 Extracted: -c0.00402 0.00409 c.00039 0.00399 c.00399 c.00399 c.00399 c.00399 c.00399 c.00399 c.00399 c.00399 c.00300 c.00202	Ethylbenzene						<0.00199 0.00199	<0.00198 0.0	0.00198
PA 300 Extracted: Jan-15-18 17:00 Jan-13-18 17:0 Jan-	m,p-Xylenes						<0.00398 0.00398	<0.00397 0.0	0.00397
PA 300 Extracted: co.00201 co.00199 co.00199 co.00199 co.00100 co.00200	o-Xylene						<0.00199 0.00199	<0.00198 0.0	0.00198
PA 300 Extracted: Jan-15-18 17:00 Jan-12-18 17:00 Jan-12-18 17:00 Jan-12-18 17:00 Jan-12-18 17:00 Jan-12-18 17:00 Jan-12-18 17:00 Jan-13-18 13:25 Jan-13-18 13:47 Jan-14-18 00:09 Analyzed: Jan-13-18 13:02 Jan-13-18 13:03 Jan-13-18 13:03 Jan-13-18 13:03 Jan-13-18 13:03 Jan-13-18 13:03 <	Total Xylenes						<0.00199 0.00199	<0.00198 0.0	0.00198
PA 300 Extracted: Jan-15-18 17:00 Jan-12-18 17:00	Total BTEX						0.00640 0.00199	<0.00198 0.0	0.00198
Analyzed: Jan-16-18 07:07 Jan-16-18 07:13 Jan-16-18 07:20 Jan-16-18 07:27 Jan-17-18 10:00 Jan-17-18 10:00 Jan-12-18 10:00 Jan-12-18 10:00 Jan-12-18 10:00 Jan-12-18 10:00 Jan-12-18 10:00 Jan-14-18 00:09 Jan-14-18 00:09<	Chloride by EPA 300	Extracted:	Jan-15-18 17:00	Jan-15-18 17:00	Jan-15-18 17:00	Jan-15-18 17:00	Jan-15-18 17:00	Jan-15-18 17:00	0
Conits/RL; mg/kg RL mg/		Analyzed:	Jan-16-18 07:07	Jan-16-18 07:13	Jan-16-18 07:20	Jan-16-18 07:27	Jan-16-18 07:34	Jan-16-18 07:41	_
Sample S		Units/RL:					mg/kg RL	mg/kg	RL
L5 Mod Extracted: Jan-12-18 10:00 Jan-14-18 00:09 GRO) Units/RL: mg/kg RL mg	Chloride						32.7 4.97	38.0	4.94
Analyzed: Jan-13-18 13:02 Jan-13-18 13:25 Jan-13-18 13:47 Jan-14-18 00:09 GRO) Units/RL: mg/kg RL mg/kg RL mg/kg RL mg/kg RL GRO) <15.0 15.0 <15.0 15.0 <15.0 15.0 <15.0 15.0 A < 15.0 15.0 <15.0 15.0 <15.0 15.0 15.0 15.0 <15.0 15.0 A < 15.0 15.0 <15.0 15.0 <15.0 15.0 <15.0 15.0 <15.0 15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0 <15.0	TPH by SW8015 Mod	Extracted:		Jan-12-18 10:00	Jan-12-18 10:00	Jan-12-18 12:00	Jan-16-18 16:00	Jan-12-18 12:00	0
GRO) CRO		Analyzed:		Jan-13-18 13:25	Jan-13-18 13:47	Jan-14-18 00:09	Jan-17-18 03:02	Jan-13-18 23:48	~
GRO)		Units/RL:					mg/kg RL	mg/kg	RL
<15.0 15.0 <15.0 15.0 52.3 15.0 <15.0 15.0 <15.0 15.0 <15.0 15.0 <15.0 15.0 15.0 15.0	Gasoline Range Hydrocarbons (GRO)						<15.0 15.0	<15.0	15.0
<15.0 15.0 <15.0 15.0 32.7 15.0 15.0	Diesel Range Organics (DRO)						<15.0 15.0	<15.0	15.0
	Oil Range Hydrocarbons (ORO)						<15.0 15.0	<15.0	15.0
Total TPH	Total TPH						<15.0 15.0	<15.0	15.0

Kelsey Brooks Project Manager

Final 1.000

Page 13 of 51

Certificate of Analysis Summary 573366 Tetra Tech- Midland, Midland, TX

Project Name: Citation X Fed Com #1

212C-MD-01056.200

Project Id: Contact:

Lea County,NM Ike Tavarez

Project Location:

XENCO

Date Received in Lab: Thu Jan-11-18 04:14 pm Report Date: 18-JAN-18

Kelsey Brooks Project Manager:

	Lab Id:	573366-051	573366-052	573366-053	573366-054	573366-055	573366-056	
Amalucia Domoctod	Field Id:	West 4-5 (Borehole)	South 0-1 (Borehole)	South 2-3 (Borehole)	South 4-5 (Borehole)	East 0-1 (Borehole)	East 2-3 (Borehole)	
Analysis Requesied	Depth:							
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Jan-09-18 00:00	Jan-09-18 00:00	Jan-09-18 00:00	Jan-09-18 00:00	Jan-09-18 00:00	Jan-09-18 00:00	9
BTEX by EPA 8021B	Extracted:	Jan-13-18 08:00	Jan-13-18 08:00	Jan-13-18 08:00	Jan-13-18 08:00	Jan-13-18 08:00	Jan-13-18 08:00	0
	Analyzed:	Jan-13-18 12:44	Jan-13-18 13:03	Jan-13-18 13:23	Jan-13-18 13:42	Jan-13-18 14:01	Jan-13-18 14:59	6
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg	RL
Benzene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201	<0.00199 0.0	0.00199
Toluene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201	<0.00199 0.0	0.00199
Ethylbenzene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201	<0.00199 0.0	0.00199
m,p-Xylenes		<0.00404 0.00404	<0.00402 0.00402	<0.00398 0.00398	<0.00396 0.00396	<0.00402 0.00402	<0.00398 0.0	0.00398
o-Xylene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201	<0.00199 0.0	0.00199
Total Xylenes		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201	<0.00199 0.0	0.00199
Total BTEX		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201	<0.00199 0.0	0.00199
Chloride by EPA 300	Extracted:	Jan-15-18 17:00	Jan-16-18 09:00	Jan-16-18 09:00	Jan-16-18 09:00	Jan-16-18 09:00	Jan-16-18 09:00	0
	Analyzed:	Jan-16-18 07:48	Jan-16-18 09:58	Jan-17-18 12:26	Jan-16-18 10:19	Jan-16-18 10:26	Jan-16-18 10:33	<u>ن</u>
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg	RL
Chloride		36.1 5.00	184 4.98	149 4.93	8.34 4.96	46.3 4.92	141	4.94
TPH by SW8015 Mod	Extracted:	Jan-12-18 12:00	Jan-12-18 12:00	Jan-12-18 12:00	Jan-12-18 12:00	Jan-12-18 12:00	Jan-12-18 12:00	0
	Analyzed:	Jan-13-18 22:01	Jan-13-18 22:23	Jan-13-18 22:44	Jan-13-18 23:06	Jan-13-18 15:40	Jan-13-18 16:48	∞ ∞
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0	15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0	15.0

Kelsey Brooks Project Manager

Page 14 of 51

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Certificate of Analysis Summary 573366

Tetra Tech- Midland, Midland, TX

Project Name: Citation X Fed Com #1

212C-MD-01056.200

Project Id: Contact:

Lea County,NM Ike Tavarez

Project Location:

XENCO

Date Received in Lab: Thu Jan-11-18 04:14 pm

Report Date: 18-JAN-18

Kelsey Brooks

Project Manager:

	Lab Id:	573366-057
Amalucia Domoctod	Field Id:	East 4-5 (Borehole)
Analysis requesieu	Depth:	
	Matrix:	SOIL
	Sampled:	Jan-09-18 00:00
BTEX by EPA 8021B	Extracted:	Jan-15-18 11:00
	Analyzed:	Jan-15-18 17:54
	Units/RL:	mg/kg RL
Benzene		0.00199 0.00199
Toluene		<0.00199 0.00199 0.00199
Ethylbenzene		<0.00199 0.00199 0.00199
m,p-Xylenes		<0.00398 0.00398
o-Xylene		<0.00199 0.00199
Total Xylenes		<0.00199 0.00199
Total BTEX		<0.00199 0.00199 0.00199
Chloride by EPA 300	Extracted:	Jan-16-18 09:00
	Analyzed:	Jan-16-18 10:40
	Units/RL:	mg/kg RL
Chloride		39.8 4.99
TPH by SW8015 Mod	Extracted:	Jan-12-18 12:00
	Analyzed:	Jan-13-18 17:11
	Units/RL:	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0
Diesel Range Organics (DRO)	-	<15.0 15.0
Oil Range Hydrocarbons (ORO)	-	<15.0 15.0
Total TPH		<15.0 15.0

Kelsey Brooks Project Manager

Page 15 of 51

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

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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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(432) 563-1800	(432) 563-1713
(602) 437-0330	
	(281) 240-4200 (214) 902 0300 (210) 509-3334 (432) 563-1800



Project Name: Citation X Fed Com #1

Work Orders: 573366,

Project ID: 212C-MD-01056.200

Lab Batch #: 3038355 **Sample:** 573366-018 / SMP

Matrix: Soil Batch:

Units: mg/kg Date Analyzed: 01/12/18 20:23	SU	RROGATE RE	ECOVERY S	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0359	0.0300	120	80-120	

Lab Batch #: 3038355 Sample: 573366-003 / SMP Batch: 1 Matrix: Soil

Units: mg/kg **Date Analyzed:** 01/12/18 23:35 SURROGATE RECOVERY STUDY **Amount** True Control BTEX by EPA 8021B Found Recovery Limits Amount Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0280 0.0300 93 80-120 4-Bromofluorobenzene 0.0270 0.0300 90 80-120

Lab Batch #: 3038355 Sample: 573366-037 / SMP Batch: Matrix: Soil

Units: mg/kg **Date Analyzed:** 01/13/18 00:11 SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

Lab Batch #: 3038355 Sample: 573366-038 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 00:31	SU	RROGATE RI	ECOVERY S	STUDY	
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluor	robenzene		0.0320	0.0300	107	80-120	
4-Bromofl	uorobenzene		0.0275	0.0300	92	80-120	

Lab Batch #: 3038355 **Sample:** 573366-039 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 00:50	SURROGATE RECOVERY STUDY						
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorob	enzene	Timury eco	0.0294	0.0300	98	80-120			
4-Bromofluor	robenzene		0.0283	0.0300	94	80-120			

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366,

Project ID: 212C-MD-01056.200

Lab Batch #: 3038355 Matrix: Soil **Sample:** 573366-043 / SMP Batch:

Units:	mg/kg	Date Analyzed: 01/13/18 01:09	SURROGATE RECOVERY STUDY					
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluor	robenzene		0.0277	0.0300	92	80-120		
4-Bromoflu	ıorobenzene		0.0268	0.0300	89	80-120		

Lab Batch #: 3038355 Sample: 573366-044 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 01/13/18 01:28 SURROGATE RECOVERY STUDY **Amount** True Control BTEX by EPA 8021B Found Recovery Limits Amount Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0300 0.0300 100 80-120 4-Bromofluorobenzene 0.0271 0.0300 90 80-120

Lab Batch #: 3038355 Sample: 573366-045 / SMP Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/13/18 01:47 SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120	

Lab Batch #: 3038391 Sample: 573366-003 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 07:29	SURROGATE RECOVERY STUDY					
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorood	ctane		82.6	100	83	70-135		
o-Terpheny	yl		41.8	50.0	84	70-135		

Lab Batch #: 3038391 Sample: 573366-018 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 07:49	SURROGATE RECOVERY STUDY					
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooct	ane		83.0	100	83	70-135		
o-Terphenyl	[43.7	50.0	87	70-135		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366,

Project ID: 212C-MD-01056.200

Lab Batch #: 3038391 Matrix: Soil **Sample:** 573366-001 / SMP Batch:

Units:	mg/kg	Date Analyzed: 01/13/18 08:09	SURROGATE RECOVERY STUDY					
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chloroocta	ane		104	100	104	70-135		
o-Terphenyl			43.2	50.0	86	70-135		

Lab Batch #: 3038391 Sample: 573366-017 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 01/13/18 08:30 SURROGATE RECOVERY STUDY **Amount** True Control TPH by SW8015 Mod Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1-Chlorooctane 90.5 100 91 70-135 o-Terphenyl 39.7 50.0 79 70-135

Lab Batch #: 3038391 Sample: 573366-030 / SMP Batch: Matrix: Soil

Units: mg/kg **Date Analyzed:** 01/13/18 08:50 SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.7	100	83	70-135	
o-Terphenyl	36.7	50.0	73	70-135	

Lab Batch #: 3038391 **Sample:** 573366-016 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 09:11	SURROGATE RECOVERY STUDY						
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooc	ctane		80.3	100	80	70-135			
o-Terpheny	yl		35.2	50.0	70	70-135			

Lab Batch #: 3038391 Sample: 573366-002 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 09:32	SURROGATE RECOVERY STUDY					
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooct	tane		84.0	100	84	70-135		
o-Terpheny	1		47.4	50.0	95	70-135		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366,

Project ID: 212C-MD-01056.200

Lab Batch #: 3038391 Matrix: Soil **Sample:** 573366-032 / SMP Batch:

Units:	mg/kg	Date Analyzed: 01/13/18 10:35	SURROGATE RECOVERY STUDY					
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooct	ane		93.1	100	93	70-135		
o-Terphenyl			46.5	50.0	93	70-135		

Lab Batch #: 3038360 Sample: 573366-047 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 01/13/18 11:09 SURROGATE RECOVERY STUDY **Amount** True Control BTEX by EPA 8021B Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0303 0.0300 101 80-120 4-Bromofluorobenzene 0.0276 0.0300 92 80-120

Lab Batch #: 3038391 Sample: 573366-037 / SMP Batch: Matrix: Soil

Units: mg/kg **Date Analyzed:** 01/13/18 11:16 SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.0	100	97	70-135	
o-Terphenyl	52.5	50.0	105	70-135	

Lab Batch #: 3038391 Sample: 573366-038 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 11:36	SURROGATE RECOVERY STUDY						
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooc	ctane	•	87.4	100	87	70-135			
o-Terpheny	yl		46.0	50.0	92	70-135			

Lab Batch #: 3038360 Sample: 573366-048 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 11:47	SURROGATE RECOVERY STUDY					
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorob	,4-Difluorobenzene		0.0299	0.0300	100	80-120		
4-Bromofluorobenzene			0.0281	0.0300	94	80-120		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366,

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Project ID: 212C-MD-01056.200

Lab Batch #: 3038391

Sample: 573366-039 / SMP

Batch: 1 Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 11:57	SURROGATE RECOVERY STUDY					
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooct	ane	-	83.7	100	84	70-135		
o-Terphenyl			44.0	50.0	88	70-135		

Units:	mg/kg	Date Analyzed: 01/13/18 12:06	SURROGATE RECOVERY STUDY						
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluor	robenzene	Analytes	0.0296	0.0300	99	80-120			
4-Bromoflu	iorobenzene		0.0271	0.0300	90	80-120			

Units: mg/kg Date Analyzed: 01/13/18 12:19 SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.3	100	96	70-135	
o-Terphenyl	48.4	50.0	97	70-135	

Units:	mg/kg	Date Analyzed: 01/13/18 12:25	SURROGATE RECOVERY STUDY						
	вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluor	obenzene		0.0288	0.0300	96	80-120			
4-Bromofluorobenzene			0.0287	0.0300	96	80-120			

Units:	mg/kg	Date Analyzed: 01/13/18 12:40	SURROGATE RECOVERY STUDY					
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooct	tane		82.1	100	82	70-135		
o-Terpheny	1		39.5	50.0	79	70-135		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366,

Project ID: 212C-MD-01056.200

Lab Batch #: 3038360 Matrix: Soil Sample: 573366-051 / SMP Batch:

Units:	mg/kg	Date Analyzed: 01/13/18 12:44	SURROGATE RECOVERY STUDY				
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluorol	benzene		0.0295	0.0300	98	80-120	
4-Bromofluorobenzene			0.0283	0.0300	94	80-120	

Lab Batch #: 3038391 Sample: 573366-045 / SMP Batch: Matrix: Soil

Units: mg/kg **Date Analyzed:** 01/13/18 13:02 SURROGATE RECOVERY STUDY **Amount** True Control TPH by SW8015 Mod Found Limits Amount Recovery Flags [A] [B] %R %R

[D] **Analytes** 1-Chlorooctane 100 86 70-135 85.8 o-Terphenyl 50.0 44.6 89 70-135

Lab Batch #: 3038360 Sample: 573366-052 / SMP Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/13/18 13:03 SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0274	0.0300	91	80-120	

Lab Batch #: 3038360 **Sample:** 573366-053 / SMP Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/13/18 13:23 SURROGATE RECOVERY STUDY							
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluor	robenzene		0.0301	0.0300	100	80-120	
4-Bromoflu	uorobenzene		0.0280	0.0300	93	80-120	

Lab Batch #: 3038391 Sample: 573366-046 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 13:25	SURROGATE RECOVERY STUDY					
	ТРН	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
		Analytes			[D]			
1-Chlorooc	tane		80.6	100	81	70-135		
o-Terpheny	<i>i</i> 1		41.2	50.0	82	70-135		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366,

Project ID: 212C-MD-01056.200

Lab Batch #: 3038360 Matrix: Soil **Sample:** 573366-054 / SMP Batch:

Units:	mg/kg	Date Analyzed: 01/13/18 13:42	SURROGATE RECOVERY STUDY						
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluoro	benzene		0.0297	0.0300	99	80-120			
4-Bromofluo	orobenzene		0.0303	0.0300	101	80-120			

Lab Batch #: 3038391 Sample: 573366-047 / SMP Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/13/18 13:47 SURROGATE RECOVERY STUDY **Amount** True Control TPH by SW8015 Mod Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1-Chlorooctane 75.7 100 76 70-135 o-Terphenyl 35.4 50.0 71 70-135

Lab Batch #: 3038360 Sample: 573366-055 / SMP Batch: Matrix: Soil

Units: mg/kg **Date Analyzed:** 01/13/18 14:01 SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 3038360 **Sample:** 573366-056 / SMP Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 14:59	SURROGATE RECOVERY STUDY							
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1,4-Difluore	obenzene		0.0310	0.0300	103	80-120				
4-Bromoflu	orobenzene		0.0299	0.0300	100	80-120				

Lab Batch #: 3038399 Sample: 573366-055 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 15:40	SURROGATE RECOVERY STUDY					
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooc	tane		88.1	100	88	70-135		
o-Terpheny	<i>i</i> 1		44.2	50.0	88	70-135		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366,

Project ID: 212C-MD-01056.200

Lab Batch #: 3038399 Matrix: Soil **Sample:** 573366-056 / SMP Batch:

Units:	mg/kg	Date Analyzed: 01/13/18 16:48	SURROGATE RECOVERY STUDY						
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooc	tane		86.1	100	86	70-135			
o-Terpheny	1		44.6	50.0	89	70-135			

Lab Batch #: 3038399 Sample: 573366-057 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 01/13/18 17:11 SURROGATE RECOVERY STUDY **Amount** True Control TPH by SW8015 Mod Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1-Chlorooctane 100 87 70-135 86.8 o-Terphenyl 50.0 44.6 89 70-135

Lab Batch #: 3038360 Sample: 573366-002 / SMP Batch: Matrix: Soil

Units: mg/kg **Date Analyzed:** 01/13/18 17:30 SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	

Lab Batch #: 3038360 Sample: 573366-001 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 17:49	SURROGATE RECOVERY STUDY						
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluor	robenzene		0.0259	0.0300	86	80-120			
4-Bromoflu	uorobenzene		0.0310	0.0300	103	80-120			

Lab Batch #: 3038399 Sample: 573366-051 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 22:01	SURROGATE RECOVERY STUDY					
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooct	ane		87.8	100	88	70-135		
o-Terpheny	1		46.3	50.0	93	70-135		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366,

o-Terphenyl

Project ID: 212C-MD-01056.200

94

70-135

Lab Batch #: 3038399 Matrix: Soil Sample: 573366-052 / SMP Batch:

Units:	mg/kg	Date Analyzed: 01/13/18 22:23	SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooct	ane	•	88.2	100	88	70-135		
o-Terpheny	1		46.3	50.0	93	70-135		

Lab Batch #: 3038399 Sample: 573366-053 / SMP Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/13/18 22:44 SURROGATE RECOVERY STUDY **Amount** True Control TPH by SW8015 Mod Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1-Chlorooctane 90.5 100 91 70-135

46.9

50.0

Lab Batch #: 3038399 Sample: 573366-054 / SMP Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/13/18 23:06 SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	55.9	50.0	112	70-135	

Lab Batch #: 3038399 Sample: 573366-050 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 23:48	SURROGATE RECOVERY STUDY						
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooc	ctane		73.0	100	73	70-135			
o-Terpheny	yl		36.0	50.0	72	70-135			

Lab Batch #: 3038399 **Sample:** 573366-048 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/14/18 00:09	SURROGATE RECOVERY STUDY					
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooct	tane		108	100	108	70-135		
o-Terpheny	1		56.1	50.0	112	70-135		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366,

Project ID: 212C-MD-01056.200

Lab Batch #: 3038367 Matrix: Soil **Sample:** 573366-032 / SMP Batch:

Units:	mg/kg	Date Analyzed: 01/15/18 17:16	SURROGATE RECOVERY STUDY						
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
		Analytes			[12]				
1,4-Difluoro	benzene		0.0243	0.0300	81	80-120			
4-Bromofluo	orobenzene		0.0256	0.0300	85	80-120			

Lab Batch #: 3038367 **Sample:** 573366-046 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 01/15/18 17:35 SURROGATE RECOVERY STUDY **Amount** True Control BTEX by EPA 8021B Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0283 0.0300 94 80-120 4-Bromofluorobenzene 0.0261 0.0300 87 80-120

Lab Batch #: 3038367 Sample: 573366-057 / SMP Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/15/18 17:54 SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0261	0.0300	87	80-120	
4-Bromofluorobenzene	0.0261	0.0300	87	80-120	

Lab Batch #: 3038511 Sample: 573366-049 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/17/18 03:02	SURROGATE RECOVERY STUDY						
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooc	ctane		90.3	99.9	90	70-135			
o-Terpheny	yl		46.5	50.0	93	70-135			

Lab Batch #: 3038511 Sample: 573366-031 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/17/18 11:47	SURROGATE RECOVERY STUDY					
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooct	ane		87.8	100	88	70-135		
o-Terphenyl			38.2	50.0	76	70-135		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366,

Project ID: 212C-MD-01056.200

Lab Batch #: 3038601 Matrix: Soil **Sample:** 573366-031 / SMP Batch:

Units:	mg/kg	Date Analyzed: 01/17/18 13:11	SURROGATE RECOVERY STUDY						
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluoro	benzene		0.0305	0.0300	102	80-120			
4-Bromofluo	orobenzene		0.0264	0.0300	88	80-120			

Lab Batch #: 3038601 Sample: 573366-016 / SMP Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 01/17/18 16:39 SURROGATE RECOVERY STUDY **Amount** True Control BTEX by EPA 8021B Found Recovery Limits Amount Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0283 0.0300 94 80-120 4-Bromofluorobenzene 0.0338 0.0300 113 80-120

Lab Batch #: 3038601 Sample: 573366-030 / SMP Batch: Matrix: Soil

Units: mg/kg **Date Analyzed:** 01/17/18 16:58 SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0242	0.0300	81	80-120	

Lab Batch #: 3038601 **Sample:** 573366-017 / SMP Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/17/18 17:17	SURROGATE RECOVERY STUDY						
	вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
		Analytes			[15]				
1,4-Difluor	robenzene		0.0270	0.0300	90	80-120			
4-Bromofluorobenzene			0.0322	0.0300	107	80-120			

Lab Batch #: 3038355 **Sample:** 7637493-1-BLK / BLK Batch: Matrix: Solid

Units:	mg/kg	Date Analyzed: 01/12/18 19:25	SURROGATE RECOVERY STUDY					
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorol	benzene		0.0299	0.0300	100	80-120		
4-Bromofluorobenzene			0.0277	0.0300	92	80-120		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366,

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TT...*4...

Project ID: 212C-MD-01056.200

Lab Batch #: 3038391 Matrix: Solid **Sample:** 7637444-1-BLK / BLK Batch: 1

Units:	mg/kg	Date Analyzed: 01/13/18 04:48	SURROGATE RECOVERY STUDY					
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooct	ane		94.8	100	95	70-135		
o-Terphenyl			49.9	50.0	100	70-135		

Lab Batch #: 3038360 **Sample:** 7637495-1-BLK / BLK Batch: 1 Matrix: Solid

-1---1-01/12/19 10:40

Units:	mg/Kg	Date Analyzed: 01/13/18 10:49	SU	RROGATE RI	ECOVERY S	STUDY	
	BTEX	by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	A	Analytes			[D]		
1,4-Difluoro	benzene		0.0273	0.0300	91	80-120	
4-Bromofluo	orobenzene		0.0257	0.0300	86	80-120	

Lab Batch #: 3038399 Sample: 7637445-1-BLK / BLK Batch: Matrix: Solid

Units: mg/kg Date Analyzed: 01/13/18 14:32 SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	71.2	100	71	70-135	
o-Terphenyl	35.1	50.0	70	70-135	

Lab Batch #: 3038367 **Sample:** 7637511-1-BLK / BLK Batch: 1 Matrix: Solid

Units:	mg/kg	Date Analyzed: 01/15/18 15:39	SURROGATE RECOVERY STUDY						
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluor	robenzene	Timury ees	0.0279	0.0300	93	80-120			
4-Bromoflu	uorobenzene		0.0244	0.0300	81	80-120			

Lab Batch #: 3038511 Sample: 7637574-1-BLK / BLK Batch: Matrix: Solid

Units:	mg/kg	Date Analyzed: 01/16/18 22:08	SURROGATE RECOVERY STUDY					
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooct	ane		92.9	100	93	70-135		
o-Terphenyl			49.9	50.0	100	70-135		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366,

Project ID: 212C-MD-01056.200

Lab Batch #: 3038601 Matrix: Solid **Sample:** 7637671-1-BLK / BLK Batch: 1

Units:	mg/kg	Date Analyzed: 01/17/18 09:59	SURROGATE RECOVERY STUDY				
	BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluorob	enzene		0.0296	0.0300	99	80-120	
4-Bromofluorobenzene			0.0281	0.0300	94	80-120	

Lab Batch #: 3038355 **Sample:** 7637493-1-BKS / BKS Batch: 1 Matrix: Solid

Units:	mg/kg	Date Analyzed: 01/12/18 17:29	SU	RROGATE RI	ECOVERY S	STUDY	
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluor	obenzene		0.0297	0.0300	99	80-120	
4-Bromoflu	orobenzene		0.0278	0.0300	93	80-120	

Sample: 7637444-1-BKS / BKS **Lab Batch #:** 3038391 Batch: 1 Matrix: Solid

Date Analyzed: 01/13/18 05:08 **Units:** mg/kg SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.1	100	93	70-135	
o-Terphenyl	57.4	50.0	115	70-135	

Sample: 7637495-1-BKS / BKS **Lab Batch #:** 3038360 Batch: Matrix: Solid

Units:	mg/kg	Date Analyzed: 01/13/18 08:55	SURROGATE RECOVERY STUDY						
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluoro	obenzene		0.0305	0.0300	102	80-120			
4-Bromoflu	orobenzene		0.0299	0.0300	100	80-120			

Lab Batch #: 3038399 **Sample:** 7637445-1-BKS / BKS Batch: Matrix: Solid

Units:	mg/kg	Date Analyzed: 01/13/18 14:54	SURROGATE RECOVERY STUDY						
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooct	tane		70.6	100	71	70-135			
o-Terpheny	1		42.2	50.0	84	70-135			

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Batch:

Project Name: Citation X Fed Com #1

Work Orders: 573366,

Project ID: 212C-MD-01056.200

Lab Batch #: 3038367

Sample: 7637511-1-BKS / BKS

Matrix: Solid

Units:	mg/kg	Date Analyzed: 01/15/18 13:44	SURROGATE RECOVERY STUDY						
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluoro	obenzene		0.0308	0.0300	103	80-120			
4-Bromofluorobenzene			0.0296	0.0300	99	80-120			

Lab Batch #: 3038511 **Sample:** 7637574-1-BKS / BKS Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 01/16/18 22:31 SURROGATE RECOVERY STUDY **Amount** True Control TPH by SW8015 Mod Found Recovery Limits Amount Flags [A] [B] %R %R [D] **Analytes** 1-Chlorooctane 90.7 100 91 70-135 o-Terphenyl 50.0 44.6 89 70-135

Lab Batch #: 3038601 **Sample:** 7637671-1-BKS / BKS Matrix: Solid Batch:

Units: mg/kg Date Analyzed: 01/17/18 08:04 SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 3038355 **Sample:** 7637493-1-BSD / BSD Batch: Matrix: Solid

Units:	mg/kg	Date Analyzed: 01/12/18 17:49	SURROGATE RECOVERY STUDY							
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1,4-Difluor	robenzene		0.0295	0.0300	98	80-120				
4-Bromofluorobenzene			0.0286	0.0300	95	80-120				

Lab Batch #: 3038391 **Sample:** 7637444-1-BSD / BSD Batch: Matrix: Solid

Units:	mg/kg	Date Analyzed: 01/13/18 05:29	SURROGATE RECOVERY STUDY						
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooct	tane		92.1	100	92	70-135			
o-Terpheny	1		55.8	50.0	112	70-135			

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366,

Project ID: 212C-MD-01056.200

Lab Batch #: 3038360

Sample: 7637495-1-BSD / BSD

Matrix: Solid Batch: 1

Units:	mg/kg	Date Analyzed: 01/13/18 09:14	SURROGATE RECOVERY STUDY					
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
		Analytes			[-,			
1,4-Difluoro	obenzene		0.0304	0.0300	101	80-120		
4-Bromoflu	orobenzene		0.0313	0.0300	104	80-120		

Lab Batch #: 3038399 **Sample:** 7637445-1-BSD / BSD Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 01/13/18 15:17 SURROGATE RECOVERY STUDY **Amount** True Control TPH by SW8015 Mod Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1-Chlorooctane 73.4 100 73 70-135 o-Terphenyl 50.0 38.8 78 70-135

Lab Batch #: 3038367 Sample: 7637511-1-BSD / BSD Batch: Matrix: Solid

Units: mg/kg Date Analyzed: 01/15/18 14:03 SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

Lab Batch #: 3038511 **Sample:** 7637574-1-BSD / BSD Batch: Matrix: Solid

Units:	mg/kg	Date Analyzed: 01/16/18 22:54	SURROGATE RECOVERY STUDY						
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooc	ctane		88.7	100	89	70-135			
o-Terpheny	yl		44.6	50.0	89	70-135			

Lab Batch #: 3038601 **Sample:** 7637671-1-BSD / BSD Batch: Matrix: Solid

Units:	mg/kg	Date Analyzed: 01/17/18 08:23	SURROGATE RECOVERY STUDY						
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorol	benzene		0.0303	0.0300	101	80-120			
4-Bromofluo	robenzene		0.0304	0.0300	101	80-120			

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366,

Project ID: 212C-MD-01056.200

Lab Batch #: 3038355 Matrix: Soil **Sample:** 573116-003 S / MS Batch:

Units:	mg/kg	Date Analyzed: 01/12/18 18:09	SURROGATE RECOVERY STUDY						
	ВТЕ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluoro	benzene		0.0296	0.0300	99	80-120			
4-Bromofluo	orobenzene		0.0290	0.0300	97	80-120			

Lab Batch #: 3038391 **Sample:** 572902-004 S / MS Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 01/13/18 06:09 SURROGATE RECOVERY STUDY **Amount** True Control TPH by SW8015 Mod Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1-Chlorooctane 78.8 100 79 70-135 o-Terphenyl 43.4 50.0 87 70-135

Lab Batch #: 3038399 Sample: 573366-055 S / MS Batch: Matrix: Soil

Units: mg/kg Date Analyzed: 01/13/18 16:02 SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.1	100	82	70-135	
o-Terphenyl	41.2	50.0	82	70-135	

Lab Batch #: 3038360 **Sample:** 573366-047 S / MS Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 18:28	SU	RROGATE R	ECOVERY S	STUDY	
	вте	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluor	robenzene		0.0308	0.0300	103	80-120	
4-Bromoflu	uorobenzene		0.0286	0.0300	95	80-120	

Lab Batch #: 3038367 **Sample:** 573485-001 S / MS Batch: Matrix: Soil

Units: m	ng/kg	Date Analyzed: 01/15/18 14:22	SU	RROGATE RE	ECOVERY S	STUDY	
	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenze	ene	Timely tes	0.0311	0.0300	104	80-120	
4-Bromofluorober	nzene		0.0310	0.0300	103	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366,

Project ID: 212C-MD-01056.200

Lab Batch #: 3038511 Matrix: Soil Sample: 572902-001 S / MS Batch: 1

Units:	mg/kg	Date Analyzed: 01/16/18 23:40	SU	RROGATE RE	ECOVERY S	STUDY	
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta	ine		85.1	99.8	85	70-135	
o-Terphenyl			36.0	49.9	72	70-135	

Lab Batch #: 3038355 **Sample:** 573116-003 SD / MSD Batch: 1 Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/12/18 18:28	SU	RROGATE RI	ECOVERY S	STUDY	
	ВТЕ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluorob	enzene		0.0352	0.0300	117	80-120	
4-Bromofluor	obenzene		0.0334	0.0300	111	80-120	

Lab Batch #: 3038391 **Sample:** 572902-004 SD / MSD Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 01/13/18 06:29 SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.7	100	81	70-135	
o-Terphenyl	39.5	50.0	79	70-135	

Lab Batch #: 3038360 **Sample:** 573366-047 SD / MSD Batch: 1 Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 09:52	SU	RROGATE RI	ECOVERY S	STUDY	
	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluor	obenzene	Analytes	0.0317	0.0300	106	80-120	
4-Bromoflu	ıorobenzene		0.0294	0.0300	98	80-120	

Lab Batch #: 3038399 **Sample:** 573366-055 SD / MSD Batch: Matrix: Soil

Units:	mg/kg	Date Analyzed: 01/13/18 16:25	SU	RROGATE RE	ECOVERY S	STUDY	
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta	ane		70.6	100	71	70-135	
o-Terphenyl			36.2	50.0	72	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Citation X Fed Com #1

Work Orders: 573366, Project ID: 212C-MD-01056.200

Lab Batch #: 3038367 **Sample:** 573485-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: Date Analyzed: 01/15/18 14:41 mg/kg SURROGATE RECOVERY STUDY Amount True Control BTEX by EPA 8021B Found Amount Limits Recovery Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0298 0.0300 99 80-120 4-Bromofluorobenzene 0.0298 0.0300 99 80-120

Units:	mg/kg	Date Analyzed: 01/17/18 00:03	SU	RROGATE RI	ECOVERY S	STUDY	
	ТРН	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorood	ctane		83.4	100	83	70-135	
o-Terpheny	yl		38.5	50.0	77	70-135	

Surrogate Recovery [D] = 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution

Page 35 of 51

BS / BSD Recoveries



Project Name: Citation X Fed Com #1

Work Order #: 573366 ALJ Analyst: Sample: 7637493-1-BKS Lab Batch ID: 3038355

Date Prepared: 01/12/2018

Batch #: 1

Date Analyzed: 01/12/2018

Project ID: 212C-MD-01056.200

Matrix: Solid

Units:	mg/kg		BLAN	X /BLANK	SPIKE / I	3LANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	LICATE F	RECOVE	RYSTUD	Y.	
	BTEX by EPA 8021B	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	lytes		[B]	[C]	<u>a</u>	<u>a</u>	Result [F]	[6]				
Benzene		<0.00201	0.100	0.0948	95	0.0998	0.0882	88	7	70-130	35	
Toluene		<0.00201	0.100	0.0928	93	0.0998	0.0864	87	7	70-130	35	
Ethylbenzene	ızene	<0.00201	0.100	0.0908	91	0.0998	0.0848	85	7	71-129	35	
m,p-Xylenes	enes	<0.00402	0.201	0.182	91	0.200	0.170	85	7	70-135	35	
o-Xylene		<0.00201	0.100	0.0902	06	0.0998	0.0854	98	5	71-133	35	
Analyst:	ALJ	Dê	ite Prepare	Date Prepared: 01/13/2018	8			Date An	Date Analyzed: 01/13/2018	1/13/2018		

Lab Batch ID: 3038360 ALJ Analyst:

mg/kg

Units:

Sample: 7637495-1-BKS

Batch #: 1

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Matrix: Solid

BTEX by EPA 8021B 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
Benzene	<0.00200	0.0998	0.104	104	0.100	0.104	104	0	70-130	35	
Toluene	<0.00200	0.0998	0.103	103	0.100	0.103	103	0	70-130	35	
Ethylbenzene	<0.00200	0.0998	0.101	101	0.100	0.101	101	0	71-129	35	
m,p-Xylenes	<0.00399	0.200	0.203	102	0.200	0.203	102	0	70-135	35	
o-Xylene	<0.00200	0.0998	0.100	100	0.100	0.101	101	1	71-133	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

Final 1.000

Page 36 of 51

Final 1.000

BS / BSD Recoveries



Project Name: Citation X Fed Com #1

Work Order #: 573366 ALJ Analyst: Sample: 7637511-1-BKS **Lab Batch ID: 3038367**

Date Prepared: 01/15/2018 Batch #: 1

Date Analyzed: 01/15/2018

Project ID: 212C-MD-01056.200

Matrix: Solid

Units:	mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	SPIKE / I	SLANK S	PIKE DUP	LICATE	RECOVI	ERY STUD	Y.	
	BTEX by EPA 8021B	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Bik. Spk Dup. %R	RPD	Control Limits	Control Limits %RPD	Flag
Analytes]	[<u>B</u>	[C]	<u>a</u>	E	Result [F]	[6]				
Benzene		<0.00200	0.100	0.0986	66	0.100	0.0974	26	1	70-130	35	
Toluene		<0.00200	0.100	0.0970	76	0.100	0.0958	96	1	70-130	35	
Ethylbenzene	ene	<0.00200	0.100	0.0953	95	0.100	0.0927	93	3	71-129	35	
m,p-Xylenes	nes	<0.00401	0.200	0.190	95	0.200	0.185	93	3	70-135	35	
o-Xylene		<0.00200	0.100	0.0942	94	0.100	0.0931	93	1	71-133	35	
Analyst:	ALJ	De	ite Prepar	Date Prepared: 01/17/2018	8			Date A	nalyzed: 0	Date Analyzed: 01/17/2018		

Lab Batch ID: 3038601

Date Prepared: 01/17/2018 Sample: 7637671-1-BKS

Batch #: 1

Matrix: Solid

Units:	mg/kg		BLANK	K /BLANK S	PIKE / B	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE R	RECOVE	RYSTUD	Y	
B. Analytes	BTEX by EPA 8021B ytes	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
Benzene		<0.00200	0.0998	0.0755	92	0.100	0.0776	78	ю	70-130	35	
Toluene		<0.00200	0.0998	0.0757	92	0.100	0.0790	62	4	70-130	35	
Ethylbenzene	zene	<0.00200	0.0998	0.0784	62	0.100	0.0816	82	4	71-129	35	
m,p-Xylenes	nes	<0.00399	0.200	0.156	78	0.200	0.163	82	4	70-135	35	
o-Xylene		<0.00200	0.0998	0.0808	81	0.100	0.0847	85	5	71-133	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

Project ID: 212C-MD-01056.200

Final 1.000

BS / BSD Recoveries



Project Name: Citation X Fed Com #1

Work Order #: 573366 OJS Analyst:

Date Analyzed: 01/15/2018 Matrix: Solid **Date Prepared:** 01/12/2018 Batch #: 1 Sample: 7637422-1-BKS Lab Batch ID: 3038314

Units:	mg/kg		BLANI	K /BLANK	SPIKE /1	3LANK S	3LANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	LICATE 1	RECOVE	RYSTUD	Ϋ́	
	Chloride by EPA 300	Blank Sample Recult	Spike	Blank	Blank	Spike	Blank	Blk. Spk		Control	Control	Flag
		Sample result [A]	name	Result	%R	nanny	Duplicate	%R	% %	%R	%RPD	riag
Ana	Analytes		[<u>B</u>]	[C]	[D]	Œ	Result [F]	[6]				
Chloride	o o	<5.00	250	238	95	250	241	96	1	90-110	20	
Analyst: OJS	OJS	De	te Prepare	Date Prepared: 01/15/2018	81			Date An	Date Analyzed: 01/16/2018	1/16/2018		

Batch #: 1

Sample: 7637503-1-BKS

Lab Batch ID: 3038452

Matrix: Solid

Units:	mg/kg		BLAN	K /BLANK	SPIKE / I	3LANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVI	RYSTUD	J.	
	Chloride by EPA 300	Blank	Spike	Blank	Blank	Spike	Blank	Blk. Spk		Control	Control	
		Sample Result	Added	Spike	Spike	Added	Spike	Dup.	RPD	Limits	Limits	Flag
		[A]		Result	%R		Duplicate	%R		%R	%RPD	
Ana	Analytes		[B]	[c]	[<u>D</u>	Œ	Result [F]	[6]				
Chloride		<5.00	250	273	109	250	275	110	1	90-110	20	
Analyst: OJS	OJS	Da	te Prepare	Date Prepared: 01/15/2018	. 89			Date Ar	Date Analyzed: 01/16/2018	1/16/2018		

BLANK /BLANK SPIKE / BLANK SPIKE DIIPI ICATE RECOVERV STIMV Matrix: Solid Batch #: 1 Sample: 7637505-1-BKS **Lab Batch ID:** 3038453 mg/kg Units:

0		DEMINI	N /DEAM	1 INE / 1		DEALTH DEALTH STINE DEALTH STINE DOLLECATE NECOVERT STODI	ICALE		7016 I W		
Chloride by EPA 300	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	[<u>C</u>	[<u>D</u>	<u>a</u>	Result [F]	[5]				
Chloride	<5.00	250	254	102	250	251	100	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

Page 38 of 51

Final 1.000

BS / BSD Recoveries



Project Name: Citation X Fed Com #1

Work Order #: 573366 OJS Analyst: Sample: 7637549-1-BKS

Date Prepared: 01/16/2018

Batch #: 1

Project ID: 212C-MD-01056.200 **Date Analyzed:** 01/16/2018

Matrix: Solid

Units:	mg/kg		BLAN	K /BLANK S	PIKE / B	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE F	RECOVE	ERY STUD	X.	
	Chloride by EPA 300	Blank	Spike	Blank	Blank	Spike	Blank	Blk. Spk	44	Control	Control	Ē
		Sample Kesuit [A]	Added	Spike Result	Spike %R	Added	Spike Duplicate	Sup.	KFD %	Limits %R	Limits %RPD	Flag
Analytes	ytes		[B]	[C]	<u>@</u>	<u>a</u>	Result [F]	[5]				
Chloride		<5.00	250	274	110	250	273	109	0	90-110	20	
Analyst:	ALJ	Da	te Prepare	Date Prepared: 01/12/2018	8			Date An	alyzed: 0	Date Analyzed: 01/13/2018		

Batch #: 1 Sample: 7637444-1-BKS Lab Batch ID: 3038391 Units:

Control Limits %RPD 35 35 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-135 RPD % 2 Blk. Spk Dup. %R [G] 102 66 Blank Spike Duplicate Result [F] 1020 993 Spike Added 1000 1000 Ξ Blank Spike %R [D] 104 104 Blank Spike Result 1040 1040 $\overline{\mathbb{C}}$ Spike Added 1000 1000 $[\mathbf{B}]$ Sample Result <15.0 <15.0 Blank $\overline{\mathbf{A}}$ TPH by SW8015 Mod Gasoline Range Hydrocarbons (GRO) Diesel Range Organics (DRO) mg/kg Analytes

Flag

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Batch #: 1 Sample: 7637445-1-BKS Lab Batch ID: 3038399 mg/kg Units:

Date Prepared: 01/12/2018

Analyst:

Date Analyzed: 01/13/2018

Matrix: Solid

TPH by SW8015 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]	[<u>D</u>]	Œ	Result [F]	[6]				
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	098	98	1000	918	92	7	70-135	35	
Diesel Range Organics (DRO)	<15.0	1000	819	82	1000	098	98	5	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

Lab Batch ID: 3038476

Page 39 of 51

Final 1.000

BS / BSD Recoveries



Project Name: Citation X Fed Com #1

Work Order #: 573366

Date Prepared: 01/16/2018 Batch #: 1 Sample: 7637574-1-BKS Lab Batch ID: 3038511

ARM

Analyst:

Project ID: 212C-MD-01056.200 Date Analyzed: 01/16/2018

Matrix: Solid

Units: mg/kg		BLAN	K /BLANK	SPIKE / 1	3LANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVI	ERY STUD	λ	
TPH by SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control	Flag
	[A]		Result	%R		Duplicate	% R	%	%R	%RPD	
Analytes		[B]	[C]	[0]	[E]	Result [F]	[6]				
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	923	92	1000	998	87	9	70-135	35	
Diesel Range Organics (DRO)	<15.0	1000	974	26	1000	925	93	5	70-135	35	

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 Relative Percent Difference RPD = 200*[(C-F)/(C+F)]

Project Name: Citation X Fed Com #1



3038355 573366 Work Order #: Lab Batch ID:

01/12/2018 Date Analyzed:

Released to Imaging: 11/17/2022 3:50:18 PM

Reporting Units:

Batch #: **QC-Sample ID:** 573116-003 S **Date Prepared:** 01/12/2018

Analyst: ALJ

Matrix: Soil

Project ID: 212C-MD-01056.200

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Parent Sample		Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[2]	% R [D]	Added [E]	Result [F]		%	% R	%RPD	
Benzene	<0.00199	0.0996	0.0868	87	0.0994	0.0896	06	3	70-130	35	
Toluene	<0.00199	0.0996	0.0852	98	0.0994	0.0865	87	2	70-130	35	
Ethylbenzene	<0.00199	0.0996	0.0806	81	0.0994	0.0824	83	2	71-129	35	
m,p-Xylenes	<0.00398	0.199	0.162	81	0.199	0.165	83	2	70-135	35	
o-Xylene	<0.00199	0.0996	0.0818	82	0.0994	0.0824	83	1	71-133	35	
Lab Batch ID: 3038360 Q	QC- Sample ID: 573366-047 S	573366-	.047 S	Bai	Batch #:	1 Matrix: Soil	: Soil				

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Analyst: ALJ

Date Prepared: 01/13/2018

01/13/2018

Date Analyzed:

Reporting Units: mg/kg		M	ATRIX SPIKI	E/MATI	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	VERY S	STUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00202	0.101	0.0970	96	0.100	0.0819	82	17	70-130	35	
Toluene	<0.00202	0.101	0.0883	87	0.100	0.0736	74	18	70-130	35	
Ethylbenzene	<0.00202	0.101	0.0742	73	0.100	0.0662	99	11	71-129	35	X
m,p-Xylenes	<0.00403	0.202	0.145	72	0.201	0.132	99	6	70-135	35	X
o-Xylene	<0.00202	0.101	0.0742	73	0.100	0.0661	99	12	71-133	35	X

Relative Percent Difference RPD = 200*[(C-F)/(C+F)]Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Page 40 of 51

Project Name: Citation X Fed Com #1



573366

Work Order #:

01/15/2018 3038367 Date Analyzed: Lab Batch ID:

Reporting Units:

QC-Sample ID: 573485-001 S **Date Prepared:** 01/15/2018

Analyst: ALJ

Matrix: Soil Batch #:

Project ID: 212C-MD-01056.200

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Parent Sample		Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C] %R	% R [D]	Added [E]	Result [F]	%R [G]	%	% R	%RPD	ı
Benzene	<0.00201	0.100	0.0771	77	0.0998	0.0778	78	1	70-130	35	
Toluene	<0.00201	0.100	0.0758	92	0.0998	0.0767	11	1	70-130	35	
Ethylbenzene	<0.00201	0.100	0.0719	72	0.0998	0.0733	73	2	71-129	35	
m,p-Xylenes	<0.00402	0.201	0.146	73	0.200	0.147	74	1	70-135	35	
o-Xylene	<0.00201	0.100	0.0743	74	0.0998	0.0737	74	1	71-133	35	
Lab Batch ID: 3038314	QC- Sample ID: 573359-002 S	573359.	-002 S	Ba	Batch #:	1 Matrix: Soil	K: Soil				

Analyst: OJS **Date Prepared:** 01/12/2018

01/15/2018

mg/kg

Reporting Units:

Date Analyzed:

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

	Chloride by EPA 300	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Analytes	Result [A]	Added [B]	[]		Added [E]	Result [F]	% R [G]	%	% R	%RPD	
Chloride		181	249	440	104	249	432	101	2	90-110	20	
Lab Batch ID:	3038314 Q	QC- Sample ID:	573370-023 S	023 S	Bat	Batch #:	1 Matrix:	: Soil				

Analyst: OJS Batch #: QC- Sample ID: 573370-023 S **Date Prepared:** 01/12/2018

01/15/2018

mg/kg

Reporting Units:

Date Analyzed:

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control	Flag
Analytes	Kesuit [A]	Added [B]	[<u>C</u>	(D)	Added [E]	Kesult [F]	% K [G]	%	% K	%KPD	
Chloride	189	250	445	102	250	456	107	2	90-110	20	

Relative Percent Difference RPD = 200*[(C-F)/(C+F)]Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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.

Final 1.000

Project Name: Citation X Fed Com #1



QC-Sample ID: 573366-030 S 01/16/2018 3038452 573366 Work Order #: Lab Batch ID:

Analyst: OJS Batch #: **Date Prepared:** 01/15/2018 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Project ID: 212C-MD-01056.200

Matrix: Soil

Flag Limits %RPD 20 Limits %R Control 90-110 RPD % Dup. [G] 106 Matrix: Soil Spiked Sample Duplicate Result [F] 367 Spike Added 247 Batch #: Ξ Sample Spiked %**R** 104 <u>=</u> Spiked Sample Result $\overline{\mathbf{c}}$ 363 QC-Sample ID: 573366-031 S Spike Added <u>B</u> 247 Parent Sample Result $\overline{\mathbf{A}}$ 106 Chloride by EPA 300 Analytes 3038452 Lab Batch ID: Chloride

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Analyst: OJS **Date Prepared:** 01/15/2018

01/16/2018

Date Analyzed:

Reporting Units:

Flag Limits %RPD Control 20 90-110 Control Limits RPD % 7 Spiked Dup. 107 Spiked Sample Result [F] Duplicate 284 Spike Added 250 Sample Spiked <u>[</u> 109 Spiked Sample Result $\overline{\mathbb{C}}$ 289 Spike Added $[\mathbf{B}]$ 250 Parent Sample Result 17.6 $\overline{\mathbf{A}}$ Chloride by EPA 300 Analytes mg/kg Chloride

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Analyst: OJS **Date Prepared:** 01/15/2018 mg/kg Reporting Units:

Matrix: Soil

Batch #:

QC-Sample ID: 573366-032 S

01/16/2018

Date Analyzed:

3038453

Lab Batch ID:

Chloride by EPA 300	Parent Sample	Snike	Spiked Sample	Spiked	Snike	Duplicate Sniked Sample	Spiked	RPD	Control	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	% R	%RPD	2 5
Chloride	996	245	1170	83	245	1180	87	1	90-110	20	X

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.

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Page 42 of 51

Date Analyzed:

mg/kg

Reporting Units:

Final 1.000

Project Name: Citation X Fed Com #1



Project ID: 212C-MD-01056.200 573366

Matrix: Soil Batch #: **QC-Sample ID:** 573366-042 S

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Analyst: OJS **Date Prepared:** 01/15/2018

01/16/2018

Date Analyzed:

Released to Imaging: 11/17/2022 3:50:18 PM

Reporting Units:

3038453

Lab Batch ID:

Work Order #:

	Chloride by EPA 300	Parent	:	Spiked Sample			Duplicate	Spiked	, s	Control	Control	i
	•	Sample Result	Spike Added	Kesult [C]	Sample %R	Spike Added	Spiked Sample Result [F]	Dup. %R	KPD %	Limits %R	Limits %RPD	Flag
	Analytes	[A]	[B]					<u>5</u>				
Chloride		112	249	371	104	249	380	108	2	90-110	20	
Lab Batch ID:	3038476 Q	QC- Sample ID: 573366-052 S	573366-	052 S	Bat	Batch #:	1 Matrix: Soil	: Soil				

OVERY STUDY	
ATE REC	Cariford
SPIKE DUPLICA	Dunling
MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVER?	Cuiltod Commission
	Parent
mg/kg	
Reporting Units:	

Analyst: OJS

Date Prepared: 01/16/2018

01/16/2018

Date Analyzed:

	Chloride by EPA 300	Parent Sample	Spike	Spiked Sample Spika Result Samp	Spiked Sample		Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Analytes	Kesult [A]	Added [B]	<u>5</u>	[D]	Added [E]	Result [F]	% R [G]	%	% R	%RPD	
Chloride		184	249	444	104	249	441	103	1	90-110	20	
Lab Batch ID:	3038476 Q	QC- Sample ID: 573366-053 S	573366	-053 S	Bat	Batch #:	1 Matrix:	: Soil				
Date Analyzed:	01/17/2018	Date Prepared: 01/16/2018	01/16/2	018	Ang	Analyst: C	OJS					

Chloride by EPA 300	Parent Sample	Spike	Spiked Sample S Result S	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[2]	% R [D]	Added [E]	Result [F]	% R [G]	%	%R	%RPD	
Chloride	149	247	405	104	247	419	109	3	90-110	20	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

mg/kg

Reporting Units:

Relative Percent Difference RPD = 200*[(C-F)/(C+F)]Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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.

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E



Project Name: Citation X Fed Com #1



3038391 573366 Work Order #: Lab Batch ID:

01/13/2018 Reporting Units: Date Analyzed:

QC-Sample ID: 572902-004 S **Date Prepared:** 01/12/2018

Batch #:

Matrix: Soil Analyst: ALJ

Project ID: 212C-MD-01056.200

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Spik Result Samp	Spiked Sample		Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	D % R	Added [E]	Result [F]	% R [G]	%	% R	%RPD	
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	687	69	1000	703	70	2	70-135	35	×
Diesel Range Organics (DRO)	<15.0	1000	725	73	1000	742	74	2	70-135	35	
Lab Batch ID: 3038399	QC- Sample ID: 573366-055 S	573366	-055 S	Bat	Batch #:	1 Matrix: Soil	s: Soil				

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Analyst: ALJ

Date Prepared: 01/12/2018

01/13/2018

Date Analyzed:

mg/kg

Reporting Units:

TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Kesult [A]	Added [B]	<u>5</u>	% R [D]	Added [E]	Result [F]	% [G]	%	% R	%RPD	
Gasoline Range Hydrocarbons (GRO)	<15.0	500	476	95	200	525	105	10	70-135	35	
Diesel Range Organics (DRO)	<15.0	500	499	100	200	557	111	11	70-135	35	
ab Batch ID: 3038511	QC- Sample ID: 572902-001 S	572902-	001 S	Bat	Batch #:	1 Matrix:	s Soil				

Analyst: ARM Batch #: **QC-Sample ID:** 572902-001 S **Date Prepared:** 01/16/2018 01/16/2018 3038511 Date Analyzed: Lab Batch ID:

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY mg/kg

Reporting Units:

TPH by SW8015 Mod	Parent Sample	Sniko	Spiked Sample Speed	Spiked	Smile	Duplicate Sniked Sample	Spiked	תממ	Control Limits	Control Limits	5
Analytes	Result [A]	Added [B]	[2]	%R [D]	Added [E]	Result [F]	%R [G]	%	% R	%RPD	a E
Gasoline Range Hydrocarbons (GRO)	<15.0	866	836	84	1000	837	84	0	70-135	35	
Diesel Range Organics (DRO)	<15.0	866	965	26	1000	964	96	0	70-135	35	

Relative Percent Difference RPD = 200*[(C-F)/(C+F)]Matrix Spike Percent Recovery [D] = 100*(C-A)/B

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.

Page 44 of 51

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Final 1.000

Relinquished by: Relinquished by: **Analysis Request of Chain of Custody Record** county, state) Client Name: comments: Receiving Laboratory: nvoice to: roject Name: roject Location LAB USE LAB # 븕 BH-4 6-7 BH-4 4-5 BH-3 BH-4 2-3 BH-4 0-1 BH-3 19-20 BH-3 14-15 BH-3 9-10 BH-3 6-7 BH-3 4-5 Run deeper samples if total TPH exceeds 5,000 mg/kg. Run deeper samples if benzene exceeds 10 mg/kg, or total BTEX exceeds 50 mg/kg 12000 Xenco COG COG COG - Citation X Fed Com #1 Lea County, NM Tetra Tech, Inc. SAMPLE IDENTIFICATION Date: Date: lime: Time: ORIGINAL COPY Received by: Received by Sampler Signature: Project #: Site Manager: 01/09/18 01/09/18 01/09/18 01/09/18 01/09/18 01/09/18 01/09/18 01/09/18 01/09/18 01/09/18 DATE SAMPLING TIME WATER Ike Tavarez MATRIX × × ×× × \times \times \times \times SOIL Clair Gonzales 212C-MD-01056.200 4000 N. Big Spring Street, Ste 401 Midland, Texas 79705 Tel (432) 682-4559 Fax (432) 682-3946 Date: Date: HCL HNO₃ PRESERVATIVE METHOD × × × × × × × ICE lime: 16:14 # CONTAINERS FILTERED (Y/N) × (Circle) HAND DELIVERED FEDEX Sample Temperature BTEX 8021B BTEX 8260B TPH TX1005 (Ext to C35) LAB USE ONLY × × × × TPH 8015M (GRO - DRO - ORO) PAH 8270C Circle or Specify Method No. Total Metals Ag As Ba Cd Cr Pb Se Hg TCLP Metals Ag As Ba Cd Cr Pb Se Hg REMARKS TCLP Volatiles ANALYSIS REQUEST TCLP Semi Volatiles Special Report Limits or TRRP Report RUSH: Same Day 24 hr Rush Charges Authorized RCI GC/MS Vol. 8260B / 624 UPS GC/MS Semi. Vol. 8270C/625 PCB's 8082 / 608 733a6 NORM PLM (Asbestos) × × × × × Chloride TDS Chloride Sulfate 48 hr General Water Chemistry (see attached list) Anion/Cation Balance 72 hr 4 of Released to Imaging: 11/17/2022 3:50:18 PM

Page 48 of 5

Analysis Request of Chain of Custody Record

Relinquished by: Relinquished by: nvoice to: county, state) Client Name: receiving Laboratory: roject Location roject Name: LAB USE ONLY LAB # H West 2-3 (Borehole) West 0-1 (Borehole) North 4-5 (Borehole) North 2-3 (Borehole) North 0-1 (Borehole) Southwest 4-5 (Borehole) Southwest 2-3 Southwest 0-1 BH-4 9-10 BH-4 14-15 Run deeper samples if benzene exceeds 10 mg/kg, or total BTEX exceeds 50 mg/kg Run deeper samples if total TPH exceeds 5,000 mg/kg. COG Xenco COG COG - Citation X Fed Com Lea County, NM (Borehole) (Borehole) Tetra Tech, Inc. SAMPLE IDENTIFICATION Date: Date: Time: Ime: #1 ORIGINAL COPY Received by: Rečeived by: Received by: Sampler Signature Project #: Site Manager: 01/09/18 01/09/18 01/09/18 01/09/18 01/09/18 01/09/18 01/09/18 91/09/18 01/09/18 01/09/18 DATE SAMPLING TIME WATER Ike Tavarez MATRIX × × × × SOIL Clair Gonzales 212C-MD-01056.20C 4000 N. Big Spring Street, Ste 401 Midland, Texas 79705 Tel (432) 682-4559 Fax (432) 682-3946 Date: Date: HCL PRESERVATIVE HNO₃ METHOD × × × × × × × ×× ICE lime: # CONTAINERS FILTERED (Y/N) × × × × × (Circle) HAND DELIVERED × Sample Temperature \times BTEX 8021B BTEX 8260B TPH TX1005 (Ext to C35) LAB USE ONLY × × × × × × × TPH 8015M (GRO - DRO - ORO) PAH 8270C Circle or Specify Method No.) Total Metals Ag As Ba Cd Cr Pb Se Hg TCLP Metals Ag As Ba Cd Cr Pb Se Hg REMARKS TCLP Volatiles ANALYSIS REQUEST TCLP Semi Volatiles Special Report Limits or TRRP Report RUSH: Same Day 24 hr FEDEX UPS Rush Charges Authorized RCI GC/MS Vol. 8260B / 624 GC/MS Semi. Vol. 8270C/625 PCB's 8082 / 608 NORM 428315 PLM (Asbestos) $\times |\times$ × × \times \times × × Chloride Sulfate TDS Chloride 48 hr General Water Chemistry (see attached list) Anion/Cation Balance 72 hr Released to Imaging: 11/17/2022 3:50:18 PM Hold

Page

5 of

Final 1.000

Analysis Request of Chain of Custody Record



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: Tetra Tech- Midland

Date/ Time Received: 01/11/2018 04:14:00 PM

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Work Order #: 573366

Temperature Measuring device used: R8

	Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?		.2
#2 *Shipping container in good condition	?	Yes
#3 *Samples received on ice?		Yes
#4 *Custody Seals intact on shipping cor	ntainer/ cooler?	N/A
#5 Custody Seals intact on sample bottle	es?	N/A
#6*Custody Seals Signed and dated?		N/A
#7 *Chain of Custody present?		Yes
#8 Any missing/extra samples?		No
#9 Chain of Custody signed when relinque	uished/ received?	Yes
#10 Chain of Custody agrees with samp	le labels/matrix?	Yes
#11 Container label(s) legible and intact	?	Yes
#12 Samples in proper container/ bottle?		Yes
#13 Samples properly preserved?		Yes
#14 Sample container(s) intact?		Yes
#15 Sufficient sample amount for indicat	ed test(s)?	Yes
#16 All samples received within hold time	e?	Yes
#17 Subcontract of sample(s)?		No
#18 Water VOC samples have zero head	dspace?	N/A
* Must be completed for after-hours de Analyst:	elivery of samples prior to placing in	the refrigerator
Checklist completed by:		Date: 01/12/2018
Checklist reviewed by:	Kelsey Brooks	Date: 01/12/2018

Analytical Report 580038

for COG Operating, LLC

Project Manager: Becky Haskell Citation X Federal COm #001H

27-MAR-18

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-18-24), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)



27-MAR-18

Project Manager: **Becky Haskell COG Operating, LLC**600 W Illinois
Midland, TX 79701

Reference: XENCO Report No(s): **580038 Citation X Federal COm #001H**

Project Address: Citation X Federal Com #001H

Becky Haskell:

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) 580038. 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. 580038 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,

Jessica Kramer

Jessica Vramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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



Sample Cross Reference 580038

COG Operating, LLC, Midland, TX

Citation X Federal COm #001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB1 @ 75	S	03-20-18 10:05		580038-001
SB1 @ 80	S	03-20-18 10:30		580038-002
SB1 @ 85	S	03-20-18 11:11		580038-003
SB1 @ 90	S	03-20-18 12:45		580038-004

CASE NARRATIVE

Client Name: COG Operating, LLC

Project Name: Citation X Federal COm #001H

Project ID: Report Date: 27-MAR-18 Work Order Number(s): 580038 Date Received: 03/22/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3044820 Inorganic Anions by EPA 300

Lab Sample ID 580038-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 580038-001, -002, -003, -004.

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

Certificate of Analysis Summary 580038 COG Operating, LLC, Midland, TX

Project Name: Citation X Federal COm #001H

Date Received in Lab: Thu Mar-22-18 09:10 am

Project Manager: Jessica Kramer

27-MAR-18	
27-	,
Report Date:	
	ß

	Lab Id:	580038-001	580038-002	580038-003	580038-004
A see Look Down to the	Field Id:	SB1 @ 75	SB1 @ 80	SB1 @ 85	SB1 @ 90
Analysis Nequesiea	Depth:				
	Matrix:	SOIL	SOIL	SOIL	SOIL
	Sampled:	Mar-20-18 10:05	Mar-20-18 10:30	Mar-20-18 11:11	Mar-20-18 12:45
Chloride by EPA 300	Extracted:	Extracted: Mar-26-18 09:30	Mar-26-18 09:30	Mar-26-18 09:30	Mar-26-18 09:30
	Analyzed:	Analyzed: Mar-26-18 17:47	Mar-26-18 18:37	Mar-26-18 18:49	Mar-26-18 19:02
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1210 D 125	3050 250	1510 125	<25.0 25.0

lession Vramer

Project Assistant Jessica Kramer

Final 1.000

Page 5 of 10

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

Version: 1.%

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.

Citation X Federal Com #001H

Project Location:

Project Id:

Contact:

Becky Haskell



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.

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

SMP Client Sample BLK Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate MS Matrix Spike MSD: Matrix Spike Duplicate

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

^{**} Surrogate recovered outside laboratory control limit.

BS / BSD Recoveries

Project Name: Citation X Federal COm #001H

Work Order #: 580038

Lab Batch ID: 3044820 RNL Analyst:

Sample: 7641494-1-BKS

Date Prepared: 03/26/2018

Date Analyzed: 03/26/2018

Project ID:

Matrix: Solid Batch #: 1

its: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	SPIKE / I	SLANK S	PIKE DUPI	LICATE 1	RECOVE	ERY STUD	J.	
Chloride by EPA 300	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	1	[B]	[C]	<u>a</u>	Œ	Result [F]	[6]				
Chloride	<25.0	250	269	108	250	267	107	1	90-110	20	

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 Relative Percent Difference RPD = 200*[(C-F)/(C+F)]

Version: 1.%

Final 1.000

Units:

Flag

Limits %RPD

Limits %R

Control

×

20

80-120

Matrix: Soil

Batch #:

QC-Sample ID: 580038-001 S

03/26/2018

Date Analyzed:

3044820

Lab Batch ID:

Form 3 - MS / MSD Recoveries

Project Name: Citation X Federal COm #001H

580038 Work Order #:

3044820 Date Analyzed: Lab Batch ID:

03/26/2018 mg/kg Reporting Units:

QC-Sample ID: 580037-001 S

Batch #:

Matrix: Soil

Project ID:

Analyst: RNL

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY **Date Prepared:** 03/26/2018

RPD % m Dup. [G] 384 Spiked Sample Duplicate Result [F] 6350 Spike Added 250 Ξ Sample Spiked %**R** 304 <u>a</u> Spiked Sample Result 6150 $\overline{\Sigma}$ Spike Added 250 Parent Sample Result 5390 $\overline{\mathbf{A}}$ Chloride by EPA 300 Analytes Chloride

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY Analyst: RNL **Date Prepared:** 03/26/2018

Flag × Limits %RPD Control 20 Limits Control 80-120 RPD % 7 Spiked Dup. 156 Spiked Sample Result [F] Duplicate 1470 Spike Added 250 Spiked Sample %R [D] 144 Spiked Sample Result 1440 $\overline{\mathbb{C}}$ Spike Added <u>B</u> 250 Parent Sample Result 1080 $\overline{\mathbf{A}}$ Chloride by EPA 300 Analytes mg/kg Reporting Units: Chloride

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.

Relative Percent Difference RPD = 200*[(C-F)/(C+F)]Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Page 8 of 10

Final 1.000

Matrix Codes

OW =Ocean/Sea Water

WI = Wipe

O = Oil WW= Waste Water

Field Comments

CHLORIDE

Number of preserved bottles

ONE

NEOH

NaHSO4

HOBN #OSZH FONH

VaOH/Zn Acetate

IOF

of bottles

Matrix

Time

2001 1030 M マ

DW = Drinking Water SW = Surface water

P = Product SL = Sludge

GW =Ground Water

S = Soil/Sed/Solid

CHAIN OF CUSTODY

Midland, TX

(432) 704-5440

Phoenix, AZ (480) 355-0900

Xenco Job#

Analytical Information

Service Center- Baton Rouge, LA (832) 712-8143 Service Center- Hobbs, NM (575) 392.7550 Service Center- Amarillo, TX (806) 678-4514

Revision 2016.1

Xenco Quote #

Lubbock, TX (806) 794-1296

El Paso, TX (915) 585-3443

Setting the Standard since 1990

Stafford, TX (281) 240-4200 Dallas, TX (214) 902-0300

San Antonio, TX (210) 509-3334

COG Operating LLC Attn: Robert McNeill Project Information Citation X Federal Con # 00 | H Project Name/Number: Citation X Federal Com #001H Project Location nvoice To:

Midland, Texas 7970 600 W. Illinois O Number

Phone No: 432-818-2372 rhaskell@concho.com, dneel2@concho.com, sihitchcock@concho.com

cbrunson@bbcinternational.com

600 W. Illinois Ave, Midland, Texas 79701

Attn: Robert McNeill

Company Address:

Project Contact: Becky Haskel Samplers's Name: Jeff Ornelas

Field ID / Point of Collection

Š

3.70 Collection Date 75

3:70 3.50 3.56 2000 06 3/2

Contract TAT 5 Day TAT 7 Day TAT Turnaround Time (Business days)

Same Day TAT

9

00 တ Next Day EMERGENCY

2 Day EMERGENCY 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

3-71/6 Date Time Date Time: 3 Relinquished by:

Received By:

Regelived By:

-	1 Hard	o affiliator and author	b armiates and supp
Regelived By:	1000	order from client commany to Xence its affiliated and anim	ninimum charge of \$75 mill
Date Time:	5/30 18 9:10	a valid purchase order from c	ond the control of Xenco A r
		 Significance of this document and relinquishment of samples constitutes a valid 	losses are due to circumstances be
. (sugneration of this document and re	benses incurred by the Client if such losses are due to circumstances beyond the control of Xenro. A minimum character will be a marked and sub-

Released to Imaging: 11/17/2022 3:50:18 PM

Client / Reporting Information

Company Name / Branch: COG Operating LLC

95007

9

	Received	2
	101	1
	Date Time:	21118
IVERY	-	*,,

By:

FED-EX / UPS: Tracking #

Notes

Level IV (Full Data Pkg /raw data)

Data Deliverable Information

TRRP Level IV

Level III Std QC+ Forms

Level II Std QC

Level 3 (CLP Forms)

UST / RG 411

Level II Report with TRRP checklist

Received By: Date Time:

Preserved where applicable

Thermo. Corr. Factor

Cooler Temp. -0.9°C

5

Custody Saal #

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to American Signas standard terms and conditions of service. Aenco will be liable only for the cost of samples and shall not assume any responsibility for any losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco's liability will be limited to the cost of samples, Any samples received by Xenco but not analyzed will be invoiced at \$5 per sample. These terms will be



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: COG Operating, LLC

Date/ Time Received: 03/22/2018 09:10:00 AM

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Work Order #: 580038 Temperature Measuring device used : IR-3

	Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		3.9	
#2 *Shipping container in good condition?		Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seals intact on shipping contai	ner/ cooler?	N/A	
#5 Custody Seals intact on sample bottles?		N/A	
#6*Custody Seals Signed and dated?		N/A	
#7 *Chain of Custody present?		Yes	
#8 Any missing/extra samples?		No	
#9 Chain of Custody signed when relinquish	ned/ received?	Yes	
#10 Chain of Custody agrees with sample la	abels/matrix?	Yes	
#11 Container label(s) legible and intact?		Yes	
#12 Samples in proper container/ bottle?		Yes	
#13 Samples properly preserved?		Yes	
#14 Sample container(s) intact?		Yes	
#15 Sufficient sample amount for indicated	test(s)?	Yes	
#16 All samples received within hold time?		Yes	
#17 Subcontract of sample(s)?		No	
#18 Water VOC samples have zero headsp	ace?	N/A	

Must be o	completed for after-hours de	PH Device/Lot#:	acing in the refrigerator
	Checklist completed by:	Bronda Ward Brenda Ward	Date: <u>03/22/2018</u>
	Checklist reviewed by:	Jessica Warner Jessica Kramer	Date: 03/22/2018



July 31, 2018

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: CITATION X

Enclosed are the results of analyses for samples received by the laboratory on 07/25/18 16:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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.

Celey D. Keene

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. Keene

Lab Director/Quality Manager



07/23/2018

Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018 Sampling Date:

Reported: 07/31/2018 Sampling Type: Soil Project Name: CITATION X Sampling Condition: Coo

Project Name: CITATION X Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: COG

Sample ID: SW 1 (H802034-01)

BTEX 8021B	mg,	/kg	Analyze	d By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/30/2018	ND	1.95	97.5	2.00	1.85	
Toluene*	<0.050	0.050	07/30/2018	ND	1.94	97.2	2.00	2.18	
Ethylbenzene*	<0.050	0.050	07/30/2018	ND	1.92	96.2	2.00	1.40	
Total Xylenes*	<0.150	0.150	07/30/2018	ND	6.05	101	6.00	1.46	
Total BTEX	<0.300	0.300	07/30/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	123	% 69.8-14	2						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/30/2018	ND	416	104	400	3.92	
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*	<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
DRO >C10-C28*	<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
EXT DRO >C28-C36	<10.0	10.0	07/27/2018	ND					
Surrogate: 1-Chlorooctane	116	% 41-142	,						
Surrogate: 1-Chlorooctadecane	107	% 37.6-14	7						

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever 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, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors 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.

Celeg D. Freene



Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018

NONE GIVEN

Reported: 07/31/2018 Project Name: CITATION X

Project Location: COG Sampling Date: 07/23/2018

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Jodi Henson

Sample ID: SW 2 (H802034-02)

Project Number:

BTEX 8021B	mg/	kg	Analyze	d By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/30/2018	ND	1.95	97.5	2.00	1.85	
Toluene*	<0.050	0.050	07/30/2018	ND	1.94	97.2	2.00	2.18	
Ethylbenzene*	<0.050	0.050	07/30/2018	ND	1.92	96.2	2.00	1.40	
Total Xylenes*	<0.150	0.150	07/30/2018	ND	6.05	101	6.00	1.46	
Total BTEX	<0.300	0.300	07/30/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	128 %	69.8-14	2						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/30/2018	ND	416	104	400	3.92	
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*	<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
DRO >C10-C28*	<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
EXT DRO >C28-C36	<10.0	10.0	07/27/2018	ND					
Surrogate: 1-Chlorooctane	113 %	6 41-142	!						
Surrogate: 1-Chlorooctadecane	104 %	6 37.6-14	7						

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Celeg D. Keine



Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018

Reported: 07/31/2018
Project Name: CITATION X
Project Number: NONE GIVEN

ma/ka

Project Location: COG

Sampling Date: 07/23/2018

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Jodi Henson

Sample ID: SW 3 (H802034-03)

RTFY 8021R

BIEX 8021B	mg	/ kg	Anaiyze	ea By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/30/2018	ND	1.95	97.5	2.00	1.85	
Toluene*	<0.050	0.050	07/30/2018	ND	1.94	97.2	2.00	2.18	
Ethylbenzene*	<0.050	0.050	07/30/2018	ND	1.92	96.2	2.00	1.40	
Total Xylenes*	<0.150	0.150	07/30/2018	ND	6.05	101	6.00	1.46	
Total BTEX	<0.300	0.300	07/30/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	127	% 69.8-14	2						
Chloride, SM4500CI-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/30/2018	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
DRO >C10-C28*	<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
EXT DRO >C28-C36	<10.0	10.0	07/27/2018	ND					
Surrogate: 1-Chlorooctane	110	% 41-142	?						
Surrogate: 1-Chlorooctadecane	100	% 37.6-14	7						

Analyzed By: BE

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene



Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018

NONE GIVEN

ma/ka

Reported: 07/31/2018
Project Name: CITATION X

Project Location: COG

Sampling Date: 07/23/2018

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SW 4 (H802034-04)

Project Number:

RTFY 8021R

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/30/2018	ND	1.95	97.5	2.00	1.85	
Toluene*	<0.050	0.050	07/30/2018	ND	1.94	97.2	2.00	2.18	
Ethylbenzene*	<0.050	0.050	07/30/2018	ND	1.92	96.2	2.00	1.40	
Total Xylenes*	<0.150	0.150	07/30/2018	ND	6.05	101	6.00	1.46	
Total BTEX	<0.300	0.300	07/30/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	127 9	% 69.8-14	2						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/30/2018	ND	416	104	400	3.92	
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*	<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
DRO >C10-C28*	<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
EXT DRO >C28-C36	<10.0	10.0	07/27/2018	ND					
Surrogate: 1-Chlorooctane	114 %	% 41-142	ı						
Surrogate: 1-Chlorooctadecane	105 9	% 37.6-14	7						

Applyzod By: BE

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Celey D. Keene



Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018

Reported: 07/31/2018
Project Name: CITATION X
Project Number: NONE GIVEN

ma/ka

Project Location: COG

Sampling Date: 07/23/2018

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Jodi Henson

Sample ID: SW 5 (H802034-05)

RTFY 8021R

Dogult								
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<0.050	0.050	07/30/2018	ND	1.95	97.5	2.00	1.85	
<0.050	0.050	07/30/2018	ND	1.94	97.2	2.00	2.18	
<0.050	0.050	07/30/2018	ND	1.92	96.2	2.00	1.40	
<0.150	0.150	07/30/2018	ND	6.05	101	6.00	1.46	
<0.300	0.300	07/30/2018	ND					
126 9	% 69.8-14.	2						
mg/	'kg	Analyze	d By: AC					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<16.0	16.0	07/30/2018	ND	416	104	400	3.92	
mg/	'kg	Analyze	d By: MS					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
<10.0	10.0	07/27/2018	ND					
111 9	% 41-142							
102 9	% 37.6-14	7						
-	<0.050 <0.050 <0.050 <0.150 <0.300 126 9 mg/ Result <16.0 mg/ Result <10.0 <10.0 <10.0	<0.050 <0.050 <0.050 <0.050 <0.050 <0.150 <0.300 0.300 126 % 69.8-14. mg/kg Result Reporting Limit <16.0 16.0 mg/kg Result Reporting Limit <10.0 10.0 <10.0 10.0 <10.0 10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

Applyzod By: BE

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Celey D. Keene



Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018

Reported: 07/31/2018 Project Name: CITATION X Project Number: NONE GIVEN

Project Location: COG Sampling Date: 07/23/2018

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Jodi Henson

Sample ID: SW 6 (H802034-06)

BTEX 8021B	mg/	kg	Analyze	d By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/30/2018	ND	1.95	97.5	2.00	1.85	
Toluene*	<0.050	0.050	07/30/2018	ND	1.94	97.2	2.00	2.18	
Ethylbenzene*	<0.050	0.050	07/30/2018	ND	1.92	96.2	2.00	1.40	
Total Xylenes*	<0.150	0.150	07/30/2018	ND	6.05	101	6.00	1.46	
Total BTEX	<0.300	0.300	07/30/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	129 %	69.8-14	2						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/30/2018	ND	416	104	400	3.92	
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*	<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
DRO >C10-C28*	<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
EXT DRO >C28-C36	<10.0	10.0	07/27/2018	ND					
Surrogate: 1-Chlorooctane	112 %	6 41-142	!						
Surrogate: 1-Chlorooctadecane	101 %	6 37.6-14	7						

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Celeg D. Kreene



Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018

Reported: 07/31/2018 Project Name: CITATION X Project Number: NONE GIVEN

Project Location: COG Sampling Date: 07/23/2018

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Jodi Henson

Sample ID: SW 7 (H802034-07)

BTEX 8021B	mg/	kg	Analyze	d By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/30/2018	ND	1.95	97.5	2.00	1.85	
Toluene*	<0.050	0.050	07/30/2018	ND	1.94	97.2	2.00	2.18	
Ethylbenzene*	< 0.050	0.050	07/30/2018	ND	1.92	96.2	2.00	1.40	
Total Xylenes*	<0.150	0.150	07/30/2018	ND	6.05	101	6.00	1.46	
Total BTEX	<0.300	0.300	07/30/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	126 %	69.8-14	2						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/30/2018	ND	416	104	400	3.92	
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*	<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
DRO >C10-C28*	<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
EXT DRO >C28-C36	<10.0	10.0	07/27/2018	ND					
Surrogate: 1-Chlorooctane	110 %	6 41-142	!						
Surrogate: 1-Chlorooctadecane	99.1 9	% 37.6-14	7						

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Celeg D. Keine



Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018

Reported: 07/31/2018 Project Name: CITATION X Project Number: NONE GIVEN

Project Location: COG Sampling Date: 07/23/2018

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Jodi Henson

Sample ID: SW 8 (H802034-08)

BTEX 8021B	mg/	kg	Analyze	d By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/30/2018	ND	1.95	97.5	2.00	1.85	
Toluene*	<0.050	0.050	07/30/2018	ND	1.94	97.2	2.00	2.18	
Ethylbenzene*	<0.050	0.050	07/30/2018	ND	1.92	96.2	2.00	1.40	
Total Xylenes*	<0.150	0.150	07/30/2018	ND	6.05	101	6.00	1.46	
Total BTEX	<0.300	0.300	07/30/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	122 %	69.8-14	2						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	07/30/2018	ND	416	104	400	3.92	
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*	<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
DRO >C10-C28*	<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
EXT DRO >C28-C36	<10.0	10.0	07/27/2018	ND					
Surrogate: 1-Chlorooctane	111 %	6 41-142	!						
Surrogate: 1-Chlorooctadecane	101 9	6 37.6-14	7						

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Celeg D. Keine



Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018 Reported: 07/31/2018

Project Name: CITATION X Project Number: NONE GIVEN

Project Location: COG Sampling Date: 07/23/2018

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Jodi Henson

Sample ID: SW 9 (H802034-09)

BTEX 8021B	mg/	kg	Analyze	d By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/30/2018	ND	1.95	97.5	2.00	1.85	
Toluene*	<0.050	0.050	07/30/2018	ND	1.94	97.2	2.00	2.18	
Ethylbenzene*	< 0.050	0.050	07/30/2018	ND	1.92	96.2	2.00	1.40	
Total Xylenes*	<0.150	0.150	07/30/2018	ND	6.05	101	6.00	1.46	
Total BTEX	<0.300	0.300	07/30/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	121 9	69.8-14	2						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	07/30/2018	ND	416	104	400	3.92	
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*	<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
DRO >C10-C28*	<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
EXT DRO >C28-C36	<10.0	10.0	07/27/2018	ND					
Surrogate: 1-Chlorooctane	108 9	6 41-142	!						
Surrogate: 1-Chlorooctadecane	98.0	% 37.6-14	7						

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Celeg D. Keine



Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018

Reported: 07/31/2018
Project Name: CITATION X
Project Number: NONE GIVEN

Project Location: COG

Sampling Date: 07/23/2018

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SW 10 (H802034-10)

BTEX 8021B	mg,	/kg	Analyze	d By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/30/2018	ND	1.95	97.5	2.00	1.85	
Toluene*	<0.050	0.050	07/30/2018	ND	1.94	97.2	2.00	2.18	
Ethylbenzene*	<0.050	0.050	07/30/2018	ND	1.92	96.2	2.00	1.40	
Total Xylenes*	<0.150	0.150	07/30/2018	ND	6.05	101	6.00	1.46	
Total BTEX	<0.300	0.300	07/30/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	121	% 69.8-14	2						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/30/2018	ND	416	104	400	3.77	
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*	<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
DRO >C10-C28*	<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
EXT DRO >C28-C36	<10.0	10.0	07/27/2018	ND					
Surrogate: 1-Chlorooctane	108	% 41-142	?						
Surrogate: 1-Chlorooctadecane	99.6	% 37.6-14	7						

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Celeg D. Keene



Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018

Reported: 07/31/2018
Project Name: CITATION X
Project Number: NONE GIVEN

ma/ka

Project Location: COG

Sampling Date: 07/23/2018

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Jodi Henson

Sample ID: SW 11 (H802034-11)

RTFY 8021R

Result <0.050	Reporting Limit 0.050	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Oualifica
	0.050				70 NCCOVCI y	True value QC	KPD	Qualifier
	0.050	07/30/2018	ND	1.95	97.5	2.00	1.85	
<0.050	0.050	07/30/2018	ND	1.94	97.2	2.00	2.18	
<0.050	0.050	07/30/2018	ND	1.92	96.2	2.00	1.40	
<0.150	0.150	07/30/2018	ND	6.05	101	6.00	1.46	
<0.300	0.300	07/30/2018	ND					
120 9	% 69.8-14.	2						
mg/	'kg	Analyze	d By: AC					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<16.0	16.0	07/30/2018	ND	416	104	400	3.77	
mg/	'kg	Analyze	d By: MS					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
<10.0	10.0	07/27/2018	ND					
110 %	% 41-142							
102 9	% 37.6-14	7						
	<0.150 <0.300 120 9 mg/ Result <16.0 mg/ Result <10.0 <10.0 <10.0	<0.050 0.050 <0.150 0.150 <0.300 0.300 120	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

Applyzod By: BE

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Celeg D. Freene



Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018

Reported: 07/31/2018 Project Name: CITATION X Project Number: NONE GIVEN

Project Location: COG Sampling Date: 07/23/2018

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Jodi Henson

Sample ID: SW 12 (H802034-12)

BTEX 8021B	mg/	kg	Analyze	d By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/30/2018	ND	1.95	97.5	2.00	1.85	
Toluene*	<0.050	0.050	07/30/2018	ND	1.94	97.2	2.00	2.18	
Ethylbenzene*	<0.050	0.050	07/30/2018	ND	1.92	96.2	2.00	1.40	
Total Xylenes*	<0.150	0.150	07/30/2018	ND	6.05	101	6.00	1.46	
Total BTEX	<0.300	0.300	07/30/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	120 %	69.8-14	2						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/30/2018	ND	416	104	400	3.77	
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*	<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
DRO >C10-C28*	<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
EXT DRO >C28-C36	<10.0	10.0	07/27/2018	ND					
Surrogate: 1-Chlorooctane	112 %	6 41-142							
Surrogate: 1-Chlorooctadecane	103 %	% 37.6-14	7						

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Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018

Reported: 07/31/2018 Project Name: CITATION X Project Number: NONE GIVEN

Project Location: COG Sampling Date: 07/23/2018

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Jodi Henson

Sample ID: SW 13 (H802034-13)

BTEX 8021B	mg/	kg	Analyze	d By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/30/2018	ND	1.95	97.5	2.00	1.85	
Toluene*	<0.050	0.050	07/30/2018	ND	1.94	97.2	2.00	2.18	
Ethylbenzene*	<0.050	0.050	07/30/2018	ND	1.92	96.2	2.00	1.40	
Total Xylenes*	<0.150	0.150	07/30/2018	ND	6.05	101	6.00	1.46	
Total BTEX	<0.300	0.300	07/30/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	121 %	69.8-14	2						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/30/2018	ND	416	104	400	3.77	
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*	<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
DRO >C10-C28*	<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
EXT DRO >C28-C36	<10.0	10.0	07/27/2018	ND					
Surrogate: 1-Chlorooctane	109 %	6 41-142	ı						
Surrogate: 1-Chlorooctadecane	102 %	6 37.6-14	7						

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Celey D. Keine



Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018

Reported: 07/31/2018
Project Name: CITATION X
Project Number: NONE GIVEN

ma/ka

Project Location: COG

Sampling Date: 07/23/2018

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Jodi Henson

Sample ID: SW 14 (H802034-14)

RTFY 8021R

BIEX 8021B	mg	/кд	Anaiyze	a By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/30/2018	ND	1.95	97.5	2.00	1.85	
Toluene*	<0.050	0.050	07/30/2018	ND	1.94	97.2	2.00	2.18	
Ethylbenzene*	<0.050	0.050	07/30/2018	ND	1.92	96.2	2.00	1.40	
Total Xylenes*	<0.150	0.150	07/30/2018	ND	6.05	101	6.00	1.46	
Total BTEX	<0.300	0.300	07/30/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	122	% 69.8-14	2						
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/30/2018	ND	416	104	400	3.77	
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*	<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
DRO >C10-C28*	<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
EXT DRO >C28-C36	<10.0	10.0	07/27/2018	ND					
Surrogate: 1-Chlorooctane	111 9	% 41-142	•						
Surrogate: 1-Chlorooctadecane	104	% 37.6-14	7						

Analyzed By: BE

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Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018

Reported: 07/31/2018
Project Name: CITATION X
Project Number: NONE GIVEN

Project Location: COG

Sampling Date: 07/23/2018

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SW 15 (H802034-15)

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	07/30/2018	ND	1.90	95.2	2.00	2.36	
Toluene*	<0.050	0.050	07/30/2018	ND	1.97	98.7	2.00	3.58	
Ethylbenzene*	<0.050	0.050	07/30/2018	ND	2.00	100	2.00	3.81	
Total Xylenes*	<0.150	0.150	07/30/2018	ND	5.90	98.3	6.00	3.63	
Total BTEX	<0.300	0.300	07/30/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	% 69.8-14	2						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/30/2018	ND	416	104	400	3.77	
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*	<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
DRO >C10-C28*	<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
EXT DRO >C28-C36	<10.0	10.0	07/27/2018	ND					
Surrogate: 1-Chlorooctane	114	% 41-142	?						
Surrogate: 1-Chlorooctadecane	106	% 37.6-14	7						

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Analytical Results For:

BBC International, Inc.

Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 07/25/2018

Reported: 07/31/2018 Project Name: CITATION X Project Number: NONE GIVEN

Project Location: COG Sampling Date: 07/23/2018

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Jodi Henson

Sample ID: SW 16 (H802034-16)

BTEX 8021B	mg,	'kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/30/2018	ND	1.90	95.2	2.00	2.36	
Toluene*	<0.050	0.050	07/30/2018	ND	1.97	98.7	2.00	3.58	
Ethylbenzene*	<0.050	0.050	07/30/2018	ND	2.00	100	2.00	3.81	
Total Xylenes*	<0.150	0.150	07/30/2018	ND	5.90	98.3	6.00	3.63	
Total BTEX	<0.300	0.300	07/30/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	106	% 69.8-14	2						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/30/2018	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/27/2018	ND	197	98.6	200	6.42	
DRO >C10-C28*	<10.0	10.0	07/27/2018	ND	202	101	200	5.93	
EXT DRO >C28-C36	<10.0	10.0	07/27/2018	ND					
Surrogate: 1-Chlorooctane	118 9	% 41-142	?						
Surrogate: 1-Chlorooctadecane	108	% 37.6-14	7						

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Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

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

recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

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

*** Insufficient time to reach temperature.

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

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

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Relinquished By:

Page 19 of 20

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240 (505) 393-2326 FAX (505) 393-2476

Company Name: BBC International, Inc.		BILL TO		ANALYSIS REQUEST
Project Manager: Cliff Brunson		P.O. #:		- 1
Address: P.O. Box 805		Company:		
City: Hobbs State	State: NM Zip: 88241	Attn:		
Phone #: 575-397-6388 Fax #:	t: 575-397-0397	Address:		
Project #: Project	Project Owner: (C)	City:		
Project Name: (1482)		State: Zip:		
Project Location:		Phone #:		
Sampler Name: Will Brosson		Fax #:	1	
FOR LAB USE ONLY	MATRIX	PRESERV, SAMPLING	NG	
5	ER R		EX	
Lab I.D. Sample I.D.	B OR (C ITAINER INDWAT EWATEI	BASE: COOL	PH STE	
HSOROSH	# COI GROI	OTHE ACID/ OTHE DATE	TIME	
1 SW			900	
1 100	2	1 7 23/18	910 / /	
3		723/18	920/	1
7 88 7		72/8	930 / /	
5 206 5		81/2/4	040	
6 SW 6		81864	050	
		723/8	100	
8 8 8		3/4/8	1010	
6 44 8	0	12/2/2	1) (000)	
O MS O		72/18	030 / /	
PLEASE NOTE: Lability and Damages Cardinal's lability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to trie amount paid by the client for the arralyses. All claims including those for negligence and any other cause whatspever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or praised the performance of services becamed an operation of consequences.	we remedy for any claim arising whether based in contract cover shall be deemed walved unless made in writing and ages, including without limitation, business interruptions, because of the contract of the c	or tort, shall be limited to the amount paid I received by Cardinal within 30 days after loss of use, or loss of profits incurred by cil	by the client for the completion of the applicable lent, its subsidiaries,	
Relinquished By: Date:	7/23/8 Received By:		ult: D Yes D	
Time:	Time: 30gm Gennifer (Calkers		Add'l Fax #:

† Cardinal cannot accept verbal changes. Please fax written changes to 505-39\$/2476

Sample Condition
Cool Intact
Yes Yes
No No

(mitials)

Sampler - UPS - Bus - Other:

Delivered By:

(Circle One)

Relinquished By:

Page 20 of 20

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: ARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

DDC IIItellialional, IIIC.		סוררים	ANALYSIS	REQUEST
Project Manager: Cliff Brunson	24	P.O. #:	- 1	
Address: P.O. Box 805		Company:		
City: Hobbs State: NM	Zip: 88241	Attn:		
Phone #: 575-397-6388 Fax #: 575-		Address:		
Project #: Project Owner:	606	City:		
Project Name: Charten	100	State: Zip:		
Project Location:		Phone #:		
Sampler Name: MCC Dropps		Fax #:		
FOR LAB USE ONLY	MATRIX	PRESERV. SAMPLING	6	
Lab I.D. Sample I.D.		BASE: COOL	PH E	
H802034	# CON GROU WAST SOIL OIL SLUDG	ACID/I	TIME	
1 8W 11		Stall \	10HO	
12 SW /		1/23/8	180/1/	
15 SW 13		31/4/2	100	
14 SW 14	6	1/23/18	110/	
SW S		12/18	7 (/	
16 SW 16		31/2/1	130	
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out of or related to the performance of	ardinal, regardless of whether such claim is	regardless of whether such claim is based upon any of the above stated reasons or otherwise		
Rejunding by:	Received By:		Phone Result:	
Time: Sam	yennife bullet	bulley		

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

Sampler - UPS - Bus - Other:

Delivered By:

(Circle One)

enne

Collect

Time:

Received By: Lenny

Time: 4:20

Sample Condition
Cool Intact
Yes Yes
No No

CHECKED BY: (Initials)

From: Hernandez, Christina, EMNRD

To: <u>Cliff Brunson</u>; <u>Yu, Olivia, EMNRD</u>; <u>"Shelly Tucker"</u>

Cc: "Becky Haskell"; "Dakota Neel"; "Sheldon Hitchcock"; DeAnn Grant; "Ken Swinney"; "Jennifer Gilkey"; "Kathy

Purvis"

Subject: RE: COG-Citation X Federal Com #001H (1RP-4890) - Delineation Workplan

Date: Tuesday, July 3, 2018 9:07:59 AM

Dear Mr. Brunson:

NMOCD approves of the delineation completed and proposed remediation for 1RP-4890 with one condition: confirmation bottom and sidewall samples of the proposed 4 ft. bgs excavation are required. Additionally, please provide GPS coordinates for all delineation and remediation sample locations. Please be advised, confirmation sample points must not be no more than 50 ft apart and to be tested for BTEX, TPH Extended, and chlorides (sidewalls). Please provide photos for documentation including properly placed liner and soil bore logs in the remediation/closure report.

BLM like approval required.

Thanks,

Christina Hernandez
EMNRD-OCD
Environmental Specialist
1625 N. French Drive
Hobbs, NM 88240
575-393-6161 x111

Christina.Hernandez@state.nm.us

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: Cliff Brunson <cbrunson@bbcinternational.com>

Sent: Wednesday, June 6, 2018 6:51 PM

To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>; 'Shelly Tucker' <stucker@blm.gov>

Cc: Hernandez, Christina, EMNRD < Christina. Hernandez@state.nm.us>; 'Becky Haskell'

<rhaskell@concho.com>; 'Dakota Neel' <DNeel2@concho.com>; 'Sheldon Hitchcock'

<SLHitchcock@concho.com>; DeAnn Grant <agrant@concho.com>; 'Ken Swinney'

<kswinney@bbcinternational.com>; 'Jennifer Gilkey' <jgilkey@bbcinternational.com>; 'Kathy Purvis'
<kathy@bbcinternational.com>

Subject: COG-Citation X Federal Com #001H (1RP-4890) - Delineation Workplan

Olivia and Shelly,

Please find the attached Delineation Workplan and remediation proposal for the COG Citation X Federal Com #001H (1RP-4890). COG is requesting that you review this plan and is looking forward to the OCD's and BLM's approval.

If you have any questions, please let me know.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS
President
BBC International, Inc.
World-Wide Environmental Specialists
Mailing Address:
P. O. Box 805
Hobbs, NM 88241-0805 USA
Shipping Address:
1324 W. Marland St.
Hobbs, NM 88240 USA
Phone: (575) 397, 6388

Phone: (575) 397-6388 Fax: (575) 397-0397

E-Mail: cbrunson@bbcinternational.com



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From: Shelly Tucker
To: Cliff Brunson

Cc: Yu, Olivia, EMNRD; Hernandez, Christina, EMNRD; Rebecca Haskell; Dakota Neel; Sheldon Hitchcock; DeAnn

Grant; Ken Swinney; Jennifer Gilkey; Katherine Purvis

Subject: Re: [EXTERNAL] COG-Citation X Federal Com #001H (1RP-4890) - Delineation Workplan

Date: Wednesday, July 11, 2018 2:16:38 PM

BLM approves your remedial proposal.

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

Sincerely,

Shelly J Tucker
Environmental Protection

Environmental Protection Specialist O&G Spill/Release Coordinator

575.234.5905 - Direct 575.361.0084 - Cellular

575.234.6235 - Emergency Spill Number

stucker@blm.gov

Bureau of Land Management

620 E. Greene St Carlsbad, NM 88220

The **BLM acceptance/approval does not** relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event a site does not achieve successful restoration, or future issues with contaminants are encountered, the operator will be asked to address these issues until they are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

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NOTE: LPC Timing Stipulations - from March 1st through June 15th. Please plan remedial activities accordingly. Check for African Rue...treat (before it gets out of control).

On Wed, Jun 6, 2018 at 6:53 PM Cliff Brunson < cbrunson@bbcinternational.com > wrote:

Olivia and Shelly,

Please find the attached Delineation Workplan and remediation proposal for the COG Citation X Federal Com #001H (1RP-4890). COG is requesting that you review this plan and is looking forward to the OCD's and BLM's approval.

If you have any questions, please let me know.

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1324 W. Marland St.
Hobbs, NM 88240 USA
Phone: (575) 397-6388
Fax: (575) 397-0397
E-Mail: cbrunson@bbcinternational.com
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2

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From: Cliff Brunson

To: "Hernandez, Christina, EMNRD"

Cc: "Becky Haskell"; "Dakota Neel"; "Sheldon Hitchcock"; DeAnn Grant; "Ken Swinney"; "Jennifer Gilkey"; "Kathy

Purvis"

Subject: RE: COG-Citation X Federal Com #001H (1RP-4890) - Delineation Workplan

Date: Monday, July 9, 2018 9:16:40 AM

Christina,

Thank you for your reply. No worries. We will take sidewall confirmation samples.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS

President

BBC International, Inc.

World-Wide Environmental Specialists

Mailing Address: P. O. Box 805

Hobbs, NM 88241-0805 USA

Shipping Address: 1324 W. Marland St. Hobbs, NM 88240 USA Phone: (575) 397-6388 Fax: (575) 397-0397

E-Mail: cbrunson@bbcinternational.com



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From: Hernandez, Christina, EMNRD < Christina. Hernandez@state.nm.us>

Sent: Monday, July 9, 2018 9:09 AM

To: Cliff Brunson <cbrunson@bbcinternational.com>

Subject: RE: COG-Citation X Federal Com #001H (1RP-4890) - Delineation Workplan

Mr. Brunson,

Apologies for the oversight. Only sidewall confirmation samples required.

Thanks,

Christina Hernandez
EMNRD-OCD
Environmental Specialist
1625 N. French Drive

Hobbs, NM 88240 575-393-6161 x111

Christina.Hernandez@state.nm.us

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: Cliff Brunson < cbrunson@bbcinternational.com>

Sent: Friday, July 6, 2018 2:39 PM

To: Hernandez, Christina, EMNRD < Christina.Hernandez@state.nm.us; Yu, Olivia, EMNRD

<<u>Olivia.Yu@state.nm.us</u>>; 'Shelly Tucker' <<u>stucker@blm.gov</u>>

Cc: 'Becky Haskell' <<u>rhaskell@concho.com</u>>; 'Dakota Neel' <<u>DNeel2@concho.com</u>>; 'Sheldon Hitchcock' <<u>SLHitchcock@concho.com</u>>; 'DeAnn Grant' <<u>agrant@concho.com</u>>; 'Ken Swinney' <<u>kswinney@bbcinternational.com</u>>; 'Jennifer Gilkey' <<u>jgilkey@bbcinternational.com</u>>; 'Kathy Purvis' <<u>kathy@bbcinternational.com</u>>

Subject: RE: COG-Citation X Federal Com #001H (1RP-4890) - Delineation Workplan

Christina,

Thank you for the approval, however, we are questioning the need for bottom confirmation samples when we are placing a liner down in the bottom of the excavation. We have data well below the four feet and it is known what the levels are that are being left in place. Bottom confirmation samples have not previously been required when liners are being installed.

Please advise as to this part of the conditions of the approval.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS
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From: Hernandez, Christina, EMNRD < christina.Hernandez@state.nm.us>

Sent: Tuesday, July 3, 2018 9:08 AM

To: Cliff Brunson < cbrunson@bbcinternational.com >; Yu, Olivia, EMNRD < Olivia.Yu@state.nm.us >; 'Shelly Tucker' < stucker@blm.gov >

Cc: 'Becky Haskell' <<u>rhaskell@concho.com</u>>; 'Dakota Neel' <<u>DNeel2@concho.com</u>>; 'Sheldon Hitchcock' <<u>SLHitchcock@concho.com</u>>; DeAnn Grant <<u>agrant@concho.com</u>>; 'Ken Swinney' <<u>kswinney@bbcinternational.com</u>>; 'Jennifer Gilkey' <<u>jgilkey@bbcinternational.com</u>>; 'Kathy Purvis' <<u>kathy@bbcinternational.com</u>>

Subject: RE: COG-Citation X Federal Com #001H (1RP-4890) - Delineation Workplan

Dear Mr. Brunson:

NMOCD approves of the delineation completed and proposed remediation for 1RP-4890 with one condition: confirmation bottom and sidewall samples of the proposed 4 ft. bgs excavation are required. Additionally, please provide GPS coordinates for all delineation and remediation sample locations. Please be advised, confirmation sample points must not be no more than 50 ft apart and to be tested for BTEX, TPH Extended, and chlorides (sidewalls). Please provide photos for documentation including properly placed liner and soil bore logs in the remediation/closure report.

BLM like approval required.

Thanks,

Christina Hernandez
EMNRD-OCD
Environmental Specialist
1625 N. French Drive
Hobbs, NM 88240
575-393-6161 x111
Christina.Hernandez@state.nm.us

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: Cliff Brunson < cbrunson@bbcinternational.com>

Sent: Wednesday, June 6, 2018 6:51 PM

To: Yu, Olivia, EMNRD < Olivia. Yu@state.nm.us >; 'Shelly Tucker' < stucker@blm.gov > Cc: Hernandez, Christina, EMNRD < Christina. Hernandez@state.nm.us >; 'Becky Haskell'

<<u>rhaskell@concho.com</u>>; 'Dakota Neel' <<u>DNeel2@concho.com</u>>; 'Sheldon Hitchcock'

<<u>SLHitchcock@concho.com</u>>; DeAnn Grant <<u>agrant@concho.com</u>>; 'Ken Swinney'

< kswinney@bbcinternational.com >; 'Jennifer Gilkey' < jgilkey@bbcinternational.com >; 'Kathy Purvis'

< kathy@bbcinternational.com>

Subject: COG-Citation X Federal Com #001H (1RP-4890) - Delineation Workplan

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If you have any questions, please let me know.

Thanks, Cliff

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1324 W. Marland St.
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District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. **Santa Fe, NM 87505**

CONDITIONS

Action 159879

CONDITIONS

Operator:	OGRID:
COG OPERATING LLC	229137
600 W Illinois Ave	Action Number:
Midland, TX 79701	159879
	Action Type:
	[IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Create By	d Condition	Condition Date
bha	l None	11/17/2022