Closure Report

	Site Description	APPROVED By Olivia Yu at 7:19 am, Mar 14, 201
Site Name:	Loco Hills SWD Pipeline	2) en na ra de rire dini, mai 1, 201
Company:	COG Operating	NMOCD grants closure
Legal Description:	U/L K, Section 34, T17S, R32E	to 1RP-4493.
County:	Lea County, NM	
GPS Coordinates:	N 32.79031° W-103.75655°	

Release Data								
Date of Release:	10/21/2016							
Type of Release:	Produced water							
Source of Release:	Compromised flow line							
Volume of Release:	5 bbls							
Volume Recovered:	0 bbls							

Remediation Specifications									
Remediation Parameters:	Excavate the entire leak area to a depth of 4 feet. Obtain confirmation sidewall samples and test for BTEX, CI, & TPH EXT. Place a liner in the excavation. Backfill the site with clean soil.								
Remediation Activities:	01/26/2018 to 0	1/31/2018							
Plan Sent to OCD:	11/16/2017	Email from Cliff Brunson to Olivia Yu							
OCD Approval of Plan:	12/19/2017	Email from Olivia Yu to Cliff Brunson							
Plan Sent to BLM:	11/16/2017	Email from Cliff Brunson to Arthur Arias							
BLM Approval of Plan:	12/19/2017	Email from Arthur Arias to Cliff Brunson							

Supporting Documentation								
Initial C-141	Signed 10/28/2016							
Final C-141	Signed 02/09/2018							
Site Diagram	October 2017							
Groundwater Plot	50'-75'							
TOPO Maps	October 2017							
Lab Summary	11/16/16, 12/21/16, 10/12/17, 10/23/17, and 01/30/18							
Lab Analysis	11/16/16, 12/21/16, 10/12/17, 10/23/17, and 01/30/18							
Correspondence	Request and approval of remediation plan via email							

Request for Closure

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

Cliff Brunson, President, BBC International Inc.

02/15/2018

<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**

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

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

Form C-141

Revised August 8, 2011

	Release Notification and Corrective Action												
						OPERA	ΓOR		Initia	ıl Report		Final Report	
Name of Co						Contact: Robert McNeill							
Address: 60 Facility Nar		nois Avenue		d TX 79701		Telephone No. 432-230-0077 Facility Type: SWD system							
-			треппе		•								
Surface Ow	ner: Federa	al		Mineral C	wner:				API No.				
						ON OF RELEASE							
Unit Letter K	Section 34	Township 17S	Range 32E	Feet from the 1650		South Line South	Feet from the 2310		Vest Line Vest		Cou Le	•	
<u> </u>			l .	32	2.79037	5, -103.757	048	1	<u>l</u>				
				NAT	'URE	OF REL	EASE						
Type of Rele	ase: Produce	ed Water		·		Volume of	Release:		Volume R				
Source of Re	lease: Flow	line					lour of Occurrenc	e:		Hour of Dis		y:	
Was Immedia	nta Nation C	Livon?				10/21/2016 If YES, To			10/21/201	6 1:00 PM			
was milieur	ate Notice G		Yes	WHOIII!									
By Whom?						Date and H							
Was a Water	course Reac	hed?	Yes 🗵] No		If YES, Vo	olume Impacting t	he Wate	rcourse.				
If a Watercou	If a Watercourse was Impacted, Describe Fully.*												
Describe Cau				n Taken.* wline. The line w	as isolate	ed and the da	maged portion of	the floy	vline was re	emoved and	the li	ine was fused	
back together		, y a noie in th	e pory mo	wine. The line w	as isolati	ca ana me ac	imagea portion of	uic nov	vince was re	onio voa una		ine was rasea	
Describe Are													
				light mist impacte									
sampled to do			ammanon	from the release	and we v	viii present a	remediation work	k pian to	the NMOC	LD for appr	ovai p	orior to any	
I hereby certi	fy that the i	nformation gi	ven above	is true and comp	lete to th	e best of my	knowledge and u	nderstar	d that purs	uant to NM	OCD	rules and	
regulations a	ll operators a	are required to	o report an	nd/or file certain re	elease no	otifications a	nd perform correc	tive acti	ons for rele	eases which	may (endanger	
				e of a C-141 report investigate and re									
or the environ	nment. In ac	ddition, NMC	OCD accep	tance of a C-141									
federal, state,	or local law	vs and/or regu	ılations.				OH COM	CEDIA	ATTION	DHUGI			
	_		- 0				OIL CON	<u>SERV</u>	ATION	DIVISIO	<u>)N</u>		
Signature:		abox	- 16	/									
Printed Name	e: Dakota N	leel			A	Approved by	Environmental S	pecialist	:				
Title: Enviro	nmental Coc	ordinator			A	Approval Dat	e:	I	Expiration I	Date:			
E-mail Addre	ess: dneel2@	concho.com				Conditions of	Approval:			Attached			
Date: 10/28/	2016	Dha	one: 575-7	18-6033						Attached			
Date. 10/28/	2010	FIIC	me. 313-1	+0-0733						1			

^{*} Attach Additional Sheets If Necessary

District 1 1625 N. French Dr., Hobbs, NM 88240 District II Bill S. First St., Artesia, NM 88210 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**

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

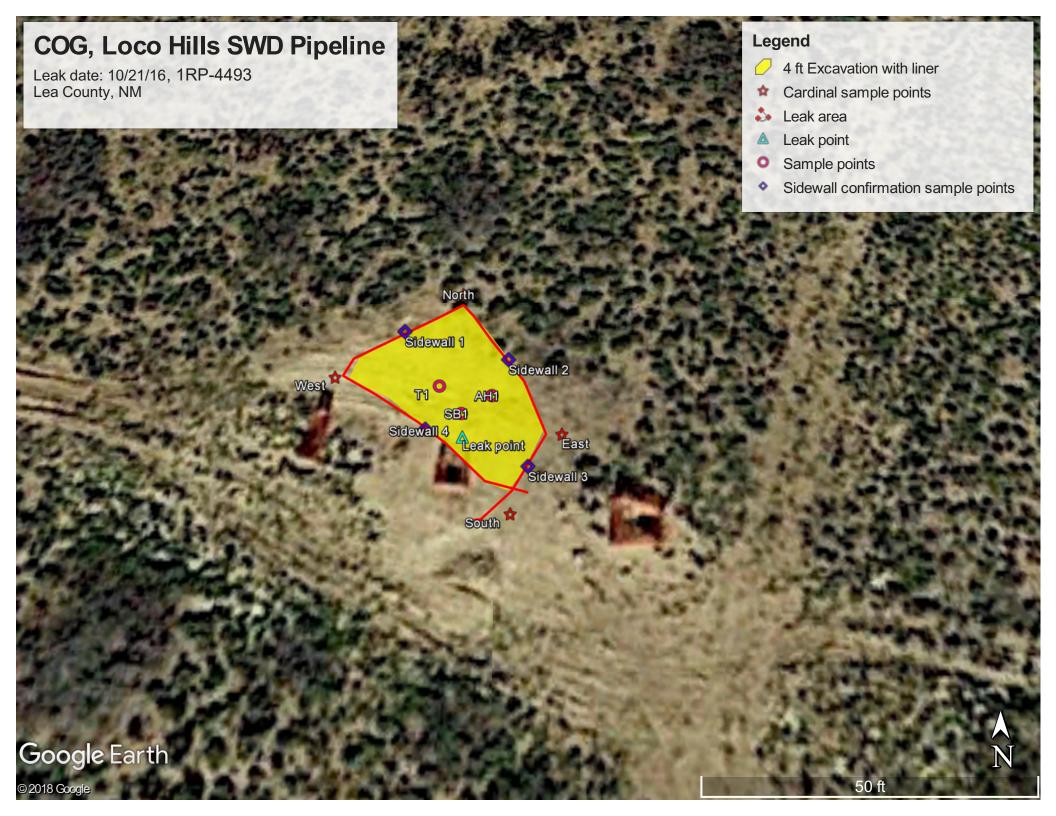
Form C-141

Revised August 8, 2011

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

Release Notification and Corrective Action

		121				OPERATOR Initial Report Fina					Final Report	
Name of Co					(Contact: Robert McNeill						
				id, TX 79701			lo. 432-230-00					
Facility Nan	ne: Loco l	Hills SWD P	ipeline		F	Facility Typ	e: SWD system	n				
Surface Own	ner: Fedei	ral		Mineral O	wner:	r: API No.						
				LOCA	TION	OF REI	LEASE					
Unit Letter	Section	Township	Range	Feet from the	North/S	South Line	Feet from the	East/V	Vest Line	County		
K	34	17S	32E	1650	5	South	2310	V	Vest	Lea County, NM		
			I	atitude N 32.79	<u>9037°</u>	Longitu	de <u>W 103.7570</u>	<u>4º</u>				
				NAT	URE (OF RELI	EASE					
Type of Relea	se: Produc	ced water			Volume of 5 bbls	Release:		Volume F	Recovered:			
Source of Rel	ease: Flow	line		·			our of Occurrence	c	Date and	Hour of Disc	overy	
Was Immedia	te Notice C	Given?				If YES, To			10/21/10	@ 1:00 pm		
			Yes 🛚	No 🛛 Not Re	quired	1						
By Whom?		4 10				Date and H						
Was a Watero	ourse Read		Yes 🗵	No		If YES, Vo	lume Impacting t	he Wate	rcourse.			
If a Watercourse was Impacted, Describe Fully.*												
						APPR	OVED					
						By Oliv	via Yu at 7	:18 a	am, Ma	ar 14, 20	018	
Describe Cau	se of Probl	em and Reme	dial Action	n Taken.*								
This release v together.	vas caused	by a hole in th	e poly flo	wline. The flowli	ne was i	solated and t	he damaged porti	on was i	removed ar	nd the line w	as fuse	d back
Describe Are	a Affected	and Cleanup A	Action Tak	en.*		-						
according to	OCD standa	ards and a ren	ediation p	a light mist impac lan was created. proved by Arthur	Remedia	ation was con	npleted in accorda	ance wit				
regulations al public health should their o or the environ	l operators or the envi operations h nment. In a	are required to ronment. The nave failed to a	report ar acceptant idequately ICD accep	is true and completed in the control of the certain received a C-141 report investigate and retained of a C-141 received in the certain certai	elease no rt by the emediate	otifications are NMOCD made contamination	nd perform correc arked as "Final Ro on that pose a thre	tive acti eport" d eat to gr	ons for rele oes not rele ound water	eases which ieve the oper r, surface wa	may en ator of ter, hui	danger liability nan health
At.	, /	01 1	10				OIL CONS	SERV	ATION	DIVISIO	N	
Signature: X	ellen	Haske	U						-	04		
Printed Name	: Rebecca	Haskell				Approved by	Environmental S ₁	pecialist	::	<u> </u>		
Title: Senior	HSE Coor	dinator			- 1	Approval Dat	3/14/2018	3 1	Expiration	Date: XX/X	x/xx	хх
E-mail Addre	ss: rhaske	ll@concho.co	m			Conditions of Approval:						
Date: Februa	ry 9, 2018		Phone:	(432) 683-7443								



COG, Loco Hills SWD Pipeline

Sample points, hang auger AH1, N 32.79035 W-103.75660 T1, N 32.79036 W-103.75663

Drilling sample:

SB1, N 32.79034 W-103.75661

Cardinal points sample, hand auger:

NORTH, N 32.79041 W-103.75662

SOUTH, N 32.79029 W-103.75659

EAST, N 32.79033 W-103.75656

WEST, N 32.79036 W-103.75669

Sidewall confirmation samples, hand auger:

Sidewall 1, N 32.79039 W-103.75665

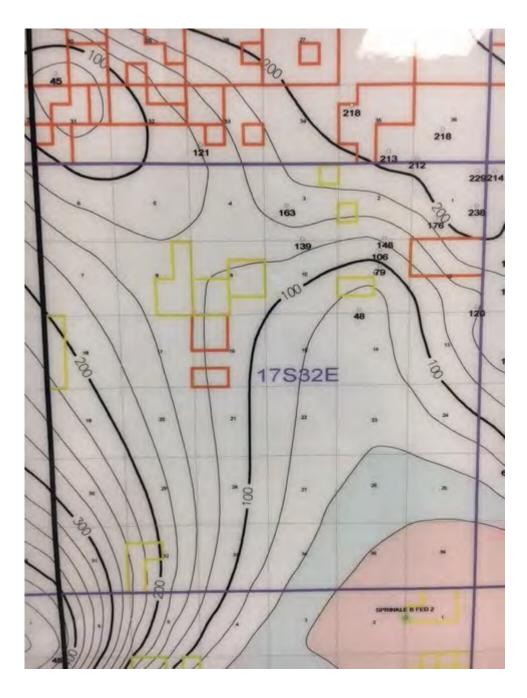
Sidewall 2, N 32.79037 W-103.75659

Sidewall 3, N 32.79031 W-103.75658

Sidewall 4, N 32.79033 W-103.75663

Leak point, N 32.79033 W-103.75661

COG, Loco Hills SWD Pipeline U/L K, Section 34, T 17S, R32E Groundwater: 50'-75'





New Mexico Office of the State Engineer Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 616454 **Northing (Y):** 3628606 **Radius:** 1700

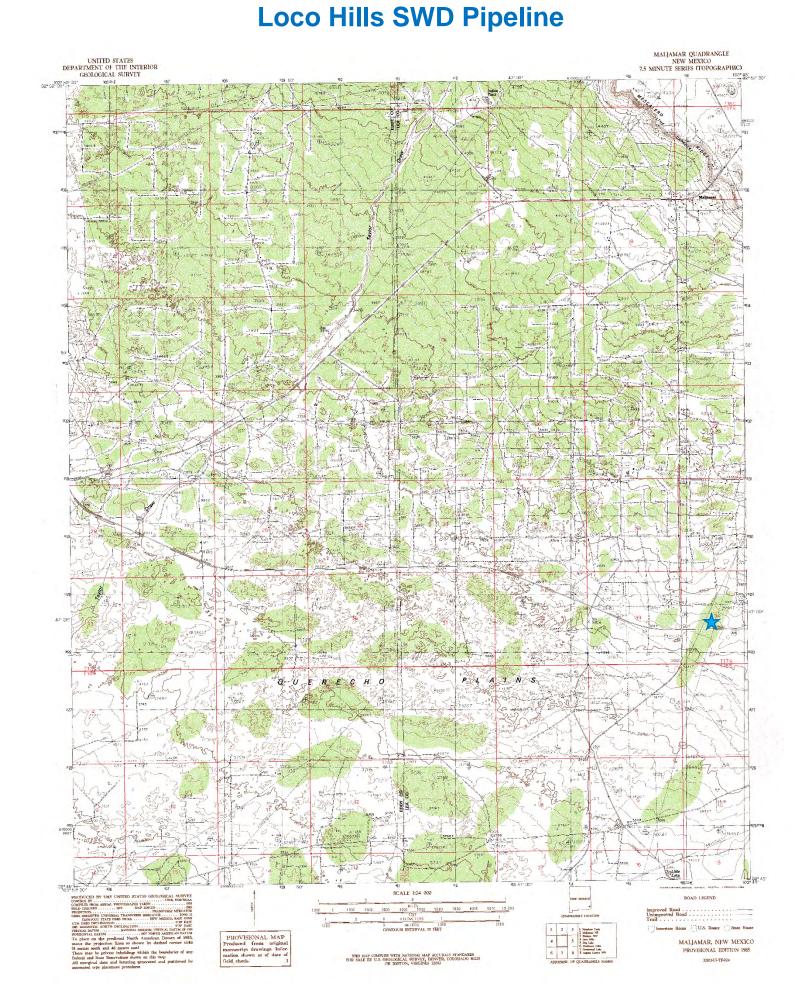
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/31/17 10:20 AM

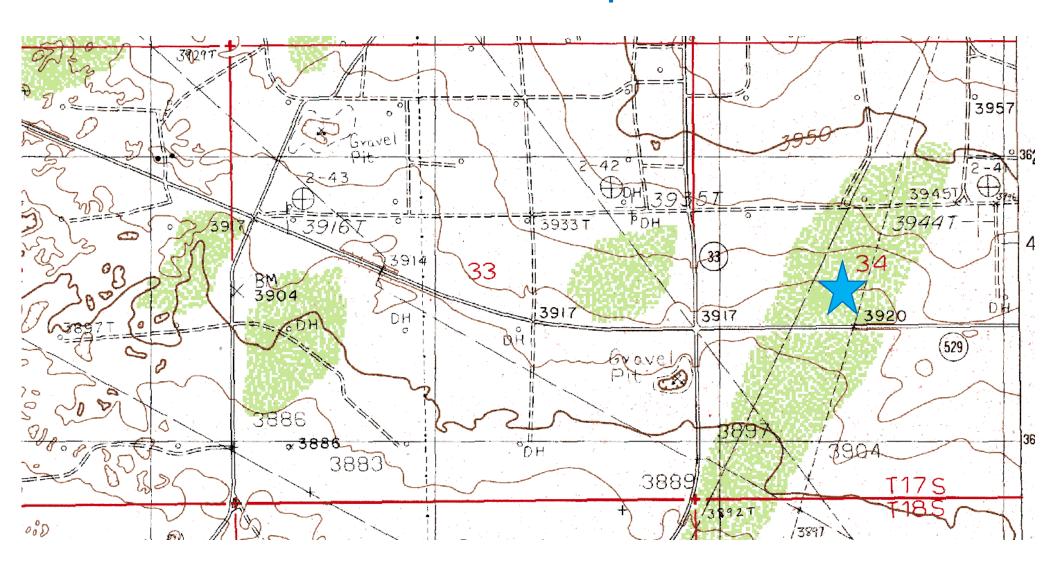
WATER COLUMN/ AVERAGE DEPTH TO WATER

Q64:	Public Land Sur	rvey System (PLSS) Sec: 34 Tws: 17S Rng: 32E								
X: ft	State Plane Coordinate System - NAD27 X: ft Y: ft Zone:									
State Plane Coordinate System - NAD83 X: ft Y: ft Zone:										
Degrees/Minutes/Seconds										
Longitude (X):	Longitude (X): Degrees: ° Minutes: ' Seconds: "									
Latitude (Y):	Degrees: °	Minutes: ' Seconds: "								
	UTM	I - NAD27								
Easting (X):	mtrs Northing (Y):	mtrs Zone:								
	C S	SUBMIT								
All	All Conversion Results are displayed as NAD 1983 UTM Zone 13									
Easting (X)	616454.0 mtrs	Northing (Y): 3628606.0 mtrs								
	~~ Please keep screen open to	to copy UTM values for Reports. ~~								

COG



COG
Loco Hills SWD Pipeline



Laboratory Analytical Results Summary Loco Hills SWD Pipeline

		Sample	AH1 @ SURFACE	AH1 @ 1'	AH1 @ 2'	AH1 @ 3'	AH1 @ 4'	AH1 @ 5'
Analyte	Method	Date	11/16/16	11/16/16	11/16/16	11/16/16	11/16/16	11/16/16
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Toluene	BTEX 8021B		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Ethylbenzene	BTEX 8021B		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Total Xylenes	BTEX 8021B		< 0.150	< 0.150	< 0.150	< 0.150	< 0.150	< 0.150
Total BTEX	BTEX 8021B		< 0.300	< 0.300	< 0.300	< 0.300	< 0.300	< 0.300
Chloride	SM4500CI-B		544	880	1280	8260	22800	11900
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		107	142	<10.0	<10.0	<10.0	<10.0

Laboratory Analytical Results Summary Loco Hills SWD Pipeline

		Sample	T1 @ SURFACE	T1 @ 1'	T1 @ 2'	T1 @ 3'	T1 @ 4'	T1 @ 5'	T1 @ 6'	T1 @ 7'	T1 @ 8'	T1 @ 10'	T1 @ 12'	T1 @ 14'	T1 @ 16'	T1 @ 18'
Analyte	Method	Date	12/21/16	12/21/16	12/21/16	12/21/16	12/21/16	12/21/16	12/21/16	12/21/16	12/21/16	12/21/16	12/21/16	12/21/16	12/21/16	12/21/16
			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	BTEX 8021B		< 0.050	n/a												
Toluene	BTEX 8021B		< 0.050	n/a												
Ethylbenzene	BTEX 8021B		< 0.050	n/a												
Total Xylenes	BTEX 8021B		< 0.150	n/a												
Total BTEX	BTEX 8021B		< 0.300	n/a												
Chloride	SM4500CI-B		1340	960	8130	13600	14000	12000	10400	9060	12100	12400	12500	9860	11200	11600
GRO	TPH 8015M		<10.0	n/a												
DRO	TPH 8015M		460	n/a												

Laboratory Analytical Results Summary Loco Hills SWD Pipeline

		Sample ID	SB1 @ 20'	SB1 @ 25'	SB1 @ 30'	SB1 @ 35'	SB1 @ 40'	SB1 @ 45'	SB1 @ 50'	SB1 @ 55'	SB1 @ 60'	SB1 @ 65'
Analyte	Method	Date	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17	10/12/17
			mg/kg									
Chloride	SM4500CI-B		9060	6530	5920	1390	3840	5200	9200	128	64	64

Laboratory Analytical Results Summary Loco Hills SWD Pipeline

		1	NORTH @	EAST @	WEST @	SOUTH @
Cardinal points		Sample ID	SURFACE	SURFACE	SURFACE	SURFACE
Analyte	Method	Date	10/23/17	10/23/17	10/23/17	10/23/17
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		< 0.050	< 0.050	< 0.050	< 0.050
Toluene	BTEX 8021B		< 0.050	< 0.050	< 0.050	< 0.050
Ethylbenzene	BTEX 8021B		< 0.050	< 0.050	< 0.050	< 0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		< 0.300	< 0.300	< 0.300	< 0.300
Chloride	SM4500CI-B		112	112	112	144
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
EXT DRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0

Laboratory Analytical Results Summary Loco Hills SWD Pipeline

		Sample ID	Sidewall 1
Analyte	Method	Date	1/30/18
			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		64
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	Sidewall 2
Analyte	Method	Date	1/30/18
			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	Sidewall 3
Analyte	Method	Date	1/30/18
			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		48
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

		Sample ID	Sidewall 4
Analyte	Method	Date	1/30/18
			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



December 01, 2016

AARON LIEB

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: LOCO HILLS SWD MAINLINE

Enclosed are the results of analyses for samples received by the laboratory on 11/30/16 11:34.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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. Keine

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



COG OPERATING
AARON LIEB
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 11/30/2016 Sampling Date: 11/16/2016

Reported: 12/01/2016 Sampling Type: Soil

Project Name: LOCO HILLS SWD MAINLINE Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Angela Cabrera

Project Location: NOT GIVEN

Sample ID: AH 1 @ SURFACE (H602673-01)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/30/2016	ND	2.10	105	2.00	1.81	
Toluene*	<0.050	0.050	11/30/2016	ND	2.16	108	2.00	1.71	
Ethylbenzene*	<0.050	0.050	11/30/2016	ND	2.12	106	2.00	1.69	
Total Xylenes*	<0.150	0.150	11/30/2016	ND	6.35	106	6.00	1.68	
Total BTEX	<0.300	0.300	11/30/2016	ND					
Surrogate: 4-Bromofluorobenzene (PID	114 %	% 73.6-14	0						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	12/01/2016	ND	400	100	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/30/2016	ND	190	95.1	200	6.67	
DRO >C10-C28	107	10.0	11/30/2016	ND	198	99.2	200	11.3	
Surrogate: 1-Chlorooctane	88.2	% 35-147	7						
Surrogate: 1-Chlorooctadecane	86.1	% 28-171							

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 related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



COG OPERATING
AARON LIEB
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 11/30/2016 Sampling Date: 11/16/2016

Reported: 12/01/2016 Sampling Type: Soil

Project Name: LOCO HILLS SWD MAINLINE Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Angela Cabrera

Project Location: NOT GIVEN

Sample ID: AH 1 @ 1' (H602673-02)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/30/2016	ND	2.10	105	2.00	1.81	
Toluene*	<0.050	0.050	11/30/2016	ND	2.16	108	2.00	1.71	
Ethylbenzene*	<0.050	0.050	11/30/2016	ND	2.12	106	2.00	1.69	
Total Xylenes*	<0.150	0.150	11/30/2016	ND	6.35	106	6.00	1.68	
Total BTEX	<0.300	0.300	11/30/2016	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	880	16.0	12/01/2016	ND	400	100	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/30/2016	ND	190	95.1	200	6.67	
DRO >C10-C28	142	10.0	11/30/2016	ND	198	99.2	200	11.3	
Surrogate: 1-Chlorooctane	85.7	% 35-147							
	00.0	20.171							

Surrogate: 1-Chlorooctadecane 90.0 % 28-171

Cardinal Laboratories *=Accredited Analyte

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COG OPERATING
AARON LIEB
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 11/30/2016 Sampling Date: 11/16/2016

Reported: 12/01/2016 Sampling Type: Soil

Project Name: LOCO HILLS SWD MAINLINE Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Angela Cabrera

Project Location: NOT GIVEN

Sample ID: AH 1 @ 2' (H602673-03)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/30/2016	ND	2.10	105	2.00	1.81	
Toluene*	<0.050	0.050	11/30/2016	ND	2.16	108	2.00	1.71	
Ethylbenzene*	<0.050	0.050	11/30/2016	ND	2.12	106	2.00	1.69	
Total Xylenes*	<0.150	0.150	11/30/2016	ND	6.35	106	6.00	1.68	
Total BTEX	<0.300	0.300	11/30/2016	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 %	73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1280	16.0	12/01/2016	ND	400	100	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/30/2016	ND	190	95.1	200	6.67	
DRO >C10-C28	<10.0	10.0	11/30/2016	ND	198	99.2	200	11.3	
Surrogate: 1-Chlorooctane	91.5	% 35-147	,						
Surrogate: 1-Chlorooctadecane	81.6	% 28-171							

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COG OPERATING
AARON LIEB
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 11/30/2016 Sampling Date: 11/16/2016

Reported: 12/01/2016 Sampling Type: Soil

Project Name: LOCO HILLS SWD MAINLINE Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Angela Cabrera

Project Location: NOT GIVEN

Sample ID: AH 1 @ 3' (H602673-04)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/30/2016	ND	2.10	105	2.00	1.81	
Toluene*	<0.050	0.050	11/30/2016	ND	2.16	108	2.00	1.71	
Ethylbenzene*	<0.050	0.050	11/30/2016	ND	2.12	106	2.00	1.69	
Total Xylenes*	<0.150	0.150	11/30/2016	ND	6.35	106	6.00	1.68	
Total BTEX	<0.300	0.300	11/30/2016	ND					
Surrogate: 4-Bromofluorobenzene (PID	112 %	73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8260	16.0	12/01/2016	ND	400	100	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/30/2016	ND	190	95.1	200	6.67	
DRO >C10-C28	<10.0	10.0	11/30/2016	ND	198	99.2	200	11.3	
Surrogate: 1-Chlorooctane	88.1	% 35-147							
G 1 CH 1	7.15	20.171							

Surrogate: 1-Chlorooctadecane 74.5 % 28-171

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AARON LIEB
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 11/30/2016 Sampling Date: 11/16/2016

Reported: 12/01/2016 Sampling Type: Soil

Project Name: LOCO HILLS SWD MAINLINE Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Angela Cabrera

Project Location: NOT GIVEN

Sample ID: AH 1 @ 4' (H602673-05)

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	11/30/2016	ND	2.10	105	2.00	1.81	
Toluene*	<0.050	0.050	11/30/2016	ND	2.16	108	2.00	1.71	
Ethylbenzene*	<0.050	0.050	11/30/2016	ND	2.12	106	2.00	1.69	
Total Xylenes*	<0.150	0.150	11/30/2016	ND	6.35	106	6.00	1.68	
Total BTEX	<0.300	0.300	11/30/2016	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 %	6 73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	22800	16.0	12/01/2016	ND	400	100	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/30/2016	ND	190	95.1	200	6.67	
DRO >C10-C28	<10.0	10.0	11/30/2016	ND	198	99.2	200	11.3	
Surrogate: 1-Chlorooctane	92.8	% 35-147	,						
Surrogate: 1-Chlorooctadecane	72.0	% 28-171							

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COG OPERATING
AARON LIEB
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 11/30/2016 Sampling Date: 11/16/2016

Reported: 12/01/2016 Sampling Type: Soil

Project Name: LOCO HILLS SWD MAINLINE Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Angela Cabrera

Project Location: NOT GIVEN

Sample ID: AH 1 @ 5' (H602673-06)

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	11/30/2016	ND	2.10	105	2.00	1.81	
Toluene*	<0.050	0.050	11/30/2016	ND	2.16	108	2.00	1.71	
Ethylbenzene*	<0.050	0.050	11/30/2016	ND	2.12	106	2.00	1.69	
Total Xylenes*	<0.150	0.150	11/30/2016	ND	6.35	106	6.00	1.68	
Total BTEX	<0.300	0.300	11/30/2016	ND					
Surrogate: 4-Bromofluorobenzene (PID	114 %	6 73.6-14	0						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11900	16.0	12/01/2016	ND	400	100	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/30/2016	ND	190	95.1	200	6.67	
DRO >C10-C28	<10.0	10.0	11/30/2016	ND	198	99.2	200	11.3	
Surrogate: 1-Chlorooctane	93.9	% 35-147	,						
Surrogate: 1-Chlorooctadecane	82.6	% 28-171							

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Notes and Definitions

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

Company Name:	COG Operation LLC		1	ı	ı	ı	I			å		o to the second second		1	l	l	ı	l	ı	ı	ı	ı	١	1	ı			1
Project Manager:								P.O.	#	300	BILL	7 10			1]		ANALYSIS	45	Sis		립	REQUEST	۱۳	1	1	1	1
Address: 2407	2407 Pecos Avenue							co	m g	Company:		COG Operating LLC	ting LLC															
City: Artesia	State: NM		Zip		88210	10		Attn:	2.			Robert McNeill	leill															
Phone #:	575-748-1553 Fax #:							Ad	Address:	S		600 W Illinois	nois															
Project #:	Project Owner:	er:						City:	*			Midland											_			_		
Project Name: L	Loco Hills SWD Main Line							Sta	State: TX	ス		Zip: 79701	-															
Project Location:								Ph	one	#	432	Phone #: (432) 221-0388																
Sampler Name:	Aaron Lieb							Fax #:	#																			
FOR LAB USE ONLY		Р.			×	MATRIX	1		PRE	PRESERV	?	SAMPLING	G															
Lab I.D. 13	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	BTEX	трн	Chloride				1							V	
_	AH1 @ surface				_			_	_	-		11/16/16	2:30 PM	×	×	×			7	4	1	7	4	1	1	4	+	
2	AH1 @ 1'									×		11/16/16	2:30 PM	×	×	×							4			-	1	
W	AH1 @ 2'									×		11/16/16	2:30 PM	×	×	×				_			-			-	1	
h	AH1 @ 3'									×		11/16/16	2:30 PM	×	×	×							-			4	1	
5	AH1 @ 4'				H					×		11/16/16	2:30 PM	×	×	×										-	1	
6	AH1 @ 5'									×		11/16/16	2:30 PM	×	×	×												
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TOKWI-000 K	2.0							-1		٦	1		7	6	(-				,	(`	(-				-



January 05, 2017

DAKOTA NEEL

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: LOCO HILLS SWD MAINLINE

Enclosed are the results of analyses for samples received by the laboratory on 12/29/16 12:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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)

Celey D. Keine

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



COG OPERATING DAKOTA NEEL P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received: 12/29/2016 Sampling Date: 12/21/2016

Reported: 01/05/2017 Sampling Type: Soil

Project Name: LOCO HILLS SWD MAINLINE Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Angela Cabrera

Project Location: NOT GIVEN

Sample ID: T1 - SURFACE (H602892-01)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/30/2016	ND	1.82	91.1	2.00	2.19	
Toluene*	<0.050	0.050	12/30/2016	ND	1.85	92.3	2.00	2.27	
Ethylbenzene*	<0.050	0.050	12/30/2016	ND	1.90	95.0	2.00	2.67	
Total Xylenes*	<0.150	0.150	12/30/2016	ND	5.54	92.3	6.00	2.61	
Total BTEX	<0.300	0.300	12/30/2016	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.3	% 73.6-14	0						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1340	16.0	01/03/2017	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/30/2016	ND	184	92.0	200	3.90	

Surrogate: 1-Chlorooctane 103 % 35-147 Surrogate: 1-Chlorooctadecane 124 % 28-171

460

10.0

Sample ID: T1 - 1' (H602892-02)

DRO >C10-C28

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	01/03/2017	ND	416	104	400	0.00	

ND

190

95.0

200

1.29

12/30/2016

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COG OPERATING DAKOTA NEEL P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received: 12/29/2016 Sampling Date: 12/21/2016

Reported: 01/05/2017 Sampling Type: Soil

Project Name: LOCO HILLS SWD MAINLINE Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Angela Cabrera

Project Location: NOT GIVEN

Sample ID: T1 - 2' (H602892-03)

Sample 1D: 11 - 2 (nou2	892-03)								
Chloride, SM4500CI-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8130	16.0	01/03/2017	ND	400	100	400	0.00	
Sample ID: T1 - 3' (H602	892-04)								
Chloride, SM4500CI-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	13600	16.0	01/03/2017	ND	400	100	400	0.00	QM-07

Sample ID: T1 - 4' (H602892-05)

Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	14000	16.0	01/03/2017	ND	400	100	400	0.00	

Sample ID: T1 - 5' (H602892-06)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12000	16.0	01/03/2017	ND	400	100	400	0.00	

Sample ID: T1 - 6' (H602892-07)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10400	16.0	01/03/2017	ND	400	100	400	0.00	

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COG OPERATING DAKOTA NEEL P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received: 12/29/2016 Sampling Date: 12/21/2016

Reported: 01/05/2017 Sampling Type: Soil

Project Name: LOCO HILLS SWD MAINLINE Sampling Condition: Cool & Intact Project Number: NONE GIVEN Sample Received By: Angela Cabrera

Project Location: NOT GIVEN

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9060	16.0	01/03/2017	ND	400	100	400	0.00	
Sample ID: T1 - 8' (H602	2892-09)								
Sample ID: T1 - 8' (H602 Chloride, SM4500Cl-B	2892-09) mg,	/kg	Analyze	d By: AC					
•	-	/kg Reporting Limit	Analyze Analyzed	d By: AC Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier

Sample ID: T1 - 10' (H602892-10)

Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12400	16.0	01/03/2017	ND	400	100	400	0.00	

Sample ID: T1 - 12' (H602892-11)

Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12500	16.0	01/03/2017	ND	400	100	400	0.00	

Sample ID: T1 - 14' (H602892-12)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9860	16.0	01/03/2017	ND	400	100	400	0.00	

Cardinal Laboratories *=Accredited Analyte

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COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/29/2016 Sampling Date: 12/21/2016

01/03/2017

Reported: 01/05/2017 Sampling Type: Soil

Project Name: LOCO HILLS SWD MAINLINE Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Angela Cabrera

Project Location: NOT GIVEN

Sample ID: T1 - 16' (H602892-13)

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

16.0

11200

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

ND

400

100

400

0.00

Sample ID: T1 - 18' (H602892-14)

Chloride

Chloride, SM4500Cl-B Analyzed By: AC mg/kg Reporting Limit Analyzed Method Blank BS True Value QC RPD Qualifier Analyte Result % Recovery Chloride 11600 16.0 01/03/2017 400 400 0.00 ND 100

Cardinal Laboratories *=Accredited Analyte

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Celeg D. Freene



Notes and Definitions

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

ecovery.

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

Cardinal Laboratories *=Accredited Analyte

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Celeg D. Freene

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

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

	(3/3) 333-2320 1 70 (0/0) 300 =						ANALYSIS REQUEST
ompany Name:	COG Operating LLC		BILL IO	1997 1997 1997 1997 1997 1997 1997 1997	1		
roject Manager:	Dakota Neel	7	P.O. #:		_		
ddress: 2208 V	2208 West Main	0	Company: COG Ope	COG Operating LLC			
Te	State: NM	Zip 88210 A	Attn: Robert McNeill	cNeill	_		
D	432-215-2783 Fax #:	A	Address: 600 W Illinois	Illinois			
roject #:	Project Owner:		City: Midland	ъ			
me:	LOCO HILLS SWD MAINLINE		State: TX Zip: 79701	701	_		
		70	Phone #: (432) 221-0388	38	-		
alar Nama	Dakota Neel & Aaron Lieb	7	Fax #:		_		
FOR LAB USE ONLY	Danuta Incel of Parion From	MATRIX	PRESERV. SAMPLING	LING	-		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER: ACID/BASE: ICE / COOL OTHER:	BTEX		TPH Chloride	
-	T1 - SURFACE		12/21/16	1:00 PM	×	×	
2			12/21/16		+	×	
(a)	T1 - 2'		12/21/16		+	×	
Ч	T1 - 3'		12/21/16	-	+	×	
S	T1 - 4'		12/21/16	-	+	×	
5	T1 - 5'		12/21/16	-	+	×	
7	T1 - 6'		12/21/16		+	×	
8	11 - 7		12/21/16	1	-	×	
Ω	T1 - 8'		12/21/16		1	×	
0	T1 - 10'		12/21/16	16 1:00 PM	L	×	
LEASE NOTE: Liability and malyses. All claims including including the many shall Care.	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remotely for any client arising whether based in contract or lort, name be immed up an extension of the applicable analyses. All claims including those for negligence and any other cause what cover shall be deemed waked up the extension withing and reserved by Cardinal within 30 styles after completion of the applicable analyses. All claims including those for negligence and any other cause what open analyses, including without limitation, business interruptions, loss of use, or loss of polits incurred by client, its substitutions in the completion of the applicable analyses. All claims including these for negligence and any other completions of the applicable analyses.	or any claim arising whether based in contract or be deemed waived unless made in writing and ding without limitation, business interruptions, k	received by Cardinal within 30 days oss of use, or loss of profits incurred	after completion of the application of the applicat	pplicable		
affilates or successors arising Relinquished By:	sing out of or related to the performance of services hereunder by Sy: Time:	Time:	based upon any or mo wood on	Phone Result: Fax Result: REMARKS:	ē. 00	Yes	□ No Add'l Phone #: □ No Add'l Fax #:
Te		Received By:	Chours				dneel2@concho.com
Relinquished By:		Accelved by.					rgrubbs@concho.com
Delivered By: (Circle One)			on CHECKED BY:	Please onl	y run d	eeper horiz	Please only run deeper horizons for BTEX AND TPH if Benzene exceeds 10ppm, 51cA exceeds 50ppm, and TPH exceeds 5000ppm.
Sampler - UPS	Sampler - UPS - Bus - Other: # 15	5.20	THE STATE OF THE S				



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

100	(010) 000-2020 1701 (010) 000 =	ŀ	I	١	ı	۱	ı	J	1	å		å	4	å	Section of the sectio		١			ANALYSIS RECLIEST	
Company Name: (COG Operating LLC												18	15	BILL 10		1	1	1	The state of the s	
*	Dakota Neel								9.	P.O. #:	#		1								
Address: 2208 West Main	st Main								C	E	pa	Company:	111	0	COG Operating LLC	ng LLC					
글	State: NM		Zip		88210	210	0		A	Attn:	1			Z	Robert McNeill	1					_
#	432-215-2783 Fax #:								A	Address:	es	S			600 W Illinois	ois					
	Project Owner:	er:							C	City:	1				Midland						
me.	LOCO HILLS SWD MAINLINE								S	tat	œ	State: TX		Z	Zip: 79701						
_									P	9	e	#	4	2)	Phone #: (432) 221-0388						
1									n	Fax #	#										
Sampler Name:	Dakota Neel & Aaron Lieb	1]	1	ı.		2	Т	t	1;	Ď.	ñ	2	٦.	SAMPI ING	9					
FOR LAB USE ONLY		Ρ,			١,	MAIRIA	3	1		-	- 2	T NEOLINA	1	7							
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:		ACID/BASE:	ICE / COOL	OTHER:		DATE	TIME	BTEX	трн	Chloride		
719790		(#	_	١		-		_		-				12/21/16	1:00 PM			×		
-		+							+	-					12/21/16	1:00 PM			×		
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14	T1 - 18'								+					+	12/21/16	1:00 PM	T	t	×		
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PLEASE NOTE: Liability and Dar	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or fort, shall be limited to the amount paid by the client for the applicable of the same including the contract or property of the same of the property of the same of the	for any clai	m aris	sing who	ether ess n	basec nade	in o	ontra	ct or	tort.	shall ed b	y Ca	imite	d to	the amount paid thin 30 days after	airm arising whether based in contract or tort, shall be limited to the amount paid by the client for the med waived unless made in writing and received by Cardinal within 30 days after completion of the a medium of the client list substituties.	the he appli	cable	ı		

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

#75

5.20

Sample Condition
Cool Intact
Yes Yes
No No

Relinquished By:

Time:

Received By

Time:

service. In no event shall Cardinal be liable for incidental or co

Received By:

ptions, loss of use, or loss of profits incurred by client, its subsidiaries

Fax Result: REMARKS: Phone Result:

☐ Yes

No No

Add'l Phone #: Add'l Fax #:

rgrubbs@concho.com dneel2@concho.com



October 19, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: LOCO HILLS SWD PIPELINE

Enclosed are the results of analyses for samples received by the laboratory on 10/13/17 13:33.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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. Keine

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



BBC International, Inc.

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

Fax To: (575) 397-0397

Received: 10/13/2017 Sampling Date: 10/12/2017

Reported: 10/19/2017 Sampling Type: Soil

Project Name: LOCO HILLS SWD PIPELINE Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Tamara Oldaker

Project Location: COG - LEA CO NM

Sample ID: SB1 @ 20 (H702779-01)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9060	16.0	10/17/2017	ND	432	108	400	0.00	
Sample ID: SB1 @ 25 (H	-								
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6530	16.0	10/17/2017	ND	432	108	400	0.00	
Sample ID: SB1 @ 30 (H	702779-03)								
Sample ID: SB1 @ 30 (H Chloride, SM4500Cl-B	702779-03) mg	/kg	Analyze	d By: AC					
• •	•	/kg Reporting Limit	Analyze Analyzed	d By: AC Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride, SM4500Cl-B	mg		-	-	BS 432	% Recovery	True Value QC 400	RPD 0.00	Qualifier
Chloride, SM4500CI-B Analyte	mg, Result 5920	Reporting Limit	Analyzed	Method Blank		,	·		Qualifier
Chloride, SM4500CI-B Analyte Chloride	mg, Result 5920	Reporting Limit	Analyzed 10/17/2017	Method Blank		,	·		Qualifier
Chloride, SM4500CI-B Analyte Chloride Sample ID: SB1 @ 35 (H	mg, Result 5920 702779-04)	Reporting Limit	Analyzed 10/17/2017	Method Blank ND		,	·		Qualifier

Cardinal Laboratories *=Accredited Analyte

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BBC International, Inc.

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

Fax To: (575) 397-0397

Received: 10/13/2017 Sampling Date: 10/12/2017

Reported: 10/19/2017 Sampling Type: Soil

Project Name: LOCO HILLS SWD PIPELINE Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Tamara Oldaker

Project Location: COG - LEA CO NM

Sample ID: SB1 @ 40 (H702779-05)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3840	16.0	10/17/2017	ND	432	108	400	0.00	
Sample ID: SB1 @ 45 (HZ	702779-06)								
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5200	16.0	10/17/2017	ND	416	104	400	3.77	QM-07
Sample ID: SB1 @ 50 (H	702779-07)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9200	16.0	10/17/2017	ND	416	104	400	3.77	
Sample ID: SB1 @ 55 (HZ	702779-08)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	10/17/2017	ND	416	104	400	3.77	
Sample ID: SB1 @ 60 (H	702779-09)								
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	10/17/2017	ND	416	104	400	3.77	

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BBC International, Inc.

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

Fax To: (575) 397-0397

Received: 10/13/2017 Sampling Date: 10/12/2017

Reported: 10/19/2017 Sampling Type: Soil

Project Name: LOCO HILLS SWD PIPELINE Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Tamara Oldaker

Project Location: COG - LEA CO NM

Sample ID: SB1 @ 65 (H702779-10)

Chioride, SM4500CI-B	noride, SM4500CI-B mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	10/17/2017	ND	416	104	400	3.77	

Cardinal Laboratories *=Accredited Analyte

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Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

(000) 000-2020 1 000 1000 000 =				ANALYSIS RECHEST	_
Company Name: BBC International, Inc.		BILL 10			
Project Manager: Cliff Brunson		P.O. #:			_
Address: P.O. Box 805		Company:			
State: N	#1	Attn: 9			
5-397-6388 Fax #:	575-397-0397	Address: 3			
Project #: Project Owner: CO G		City:			
ame: LOCO Hills SWD P	Peline	State: Zip:			
-Pa Count		Phone #:			_
JAAC		Fax #:			_
	MATRIX	PRESERV. SAMPLING	G		
Lab I.D. Sample I.D.	AB OR (C)OMP. NTAINERS UNDWATER TEWATER DGE	ER: D/BASE: COOL ER:			
1 20 1 W 30	- # Gi	V (0:12:17	21.8		
	611				
3 361 @ 30	V 1 3	V	8.30		
456 6 35	5 -	V	8:33 V		
2 5 1 5 1 0 V C	3 5		4 2 V		
7676 80		4	d:35 V		
35 W 18 28	<	1	4.5% V		
988 000	5		10:15 V		
0 50 1 00 15	6	J	10,40 A		
PLEASE NOTE: Libbig and Danages Cardinal's lability and desirts exclusive remoty for any claim arising whether based in contract or tot, shall be invited to the amount paid by the client for the please of the property of t	r any claim ailsing whether based in contrac se deemed waived unless made in writing an ing without limitation, business interruptions.	t or tod, shall be limited to the amount paid d received by Cardinal within 30 days after loss of use, or loss of profits incurred by d	amount paid by the client for the 30 days after completion of the applicable nourred by client, its subsidiaries,		
affiliate or successors arising out of or related to the performance of services hereunder by Relinquished RV: Date:	der by Cardinal, regardless of whether such claim is bas Received By:	is based upon any of the above stated rea	7	□ No Add'I Phone #:	
Time:	There the	ey /	REMARKS:		
Relarguished By: Date:	Received By:	MIN			
Thatie Amen of Times 3	hullaha	CHECKED BY:			
Delivered By: (Circle One)		(Initia	1		
Sampler - UPS - Bus - Other: /.35	Yes Yes	S. To.HS			

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476 \$75 Corrected to 25°C

Page 6 of 6

1011



October 30, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: LOCO HILLS SWD PIPELINE

Enclosed are the results of analyses for samples received by the laboratory on 10/23/17 15:56.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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. Keine

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



BBC International, Inc.

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

Fax To: (575) 397-0397

Received: 10/23/2017 Sampling Date: 10/23/2017

Reported: 10/30/2017 Sampling Type: Soil

LOCO HILLS SWD PIPELINE Project Name: Sampling Condition: Cool & Intact Project Number: NONE GIVEN Sample Received By: Tamara Oldaker

Project Location: 529 - MALJAMAR

Sample ID: NORTH @ SURFACE (H702900-01)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/27/2017	ND	1.72	86.1	2.00	0.774	
Toluene*	<0.050	0.050	10/27/2017	ND	1.72	85.8	2.00	0.184	
Ethylbenzene*	<0.050	0.050	10/27/2017	ND	1.72	86.2	2.00	0.0198	
Total Xylenes*	<0.150	0.150	10/27/2017	ND	5.15	85.8	6.00	0.319	
Total BTEX	<0.300	0.300	10/27/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.7	% 72-148	?						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	10/26/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/26/2017	ND	157	78.6	200	6.02	
DRO >C10-C28	<10.0	10.0	10/26/2017	ND	171	85.6	200	7.78	
EXT DRO >C28-C36	<10.0	10.0	10/26/2017	ND					
Surrogate: 1-Chlorooctane	60.6	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	67.1	% 34.7-15	7						

Surrogate: 1-Chlorooctadecane

*=Accredited Analyte Cardinal Laboratories

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BBC International, Inc.

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

Fax To: (575) 397-0397

Received: 10/23/2017 Sampling Date: 10/23/2017

Reported: 10/30/2017 Sampling Type: Soil

Project Name: LOCO HILLS SWD PIPELINE Sampling Condition: Cool & Intact Project Number: Sample Received By: NONE GIVEN Tamara Oldaker

Project Location: 529 - MALJAMAR

Sample ID: EAST @ SURFACE (H702900-02)

BTEX 8021B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/27/2017	ND	1.72	86.1	2.00	0.774	
Toluene*	<0.050	0.050	10/27/2017	ND	1.72	85.8	2.00	0.184	
Ethylbenzene*	<0.050	0.050	10/27/2017	ND	1.72	86.2	2.00	0.0198	
Total Xylenes*	<0.150	0.150	10/27/2017	ND	5.15	85.8	6.00	0.319	
Total BTEX	<0.300	0.300	10/27/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	100	% 72-148	3						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	10/26/2017	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/26/2017	ND	157	78.6	200	6.02	
DRO >C10-C28	<10.0	10.0	10/26/2017	ND	171	85.6	200	7.78	
EXT DRO >C28-C36	<10.0	10.0	10/26/2017	ND					
Surrogate: 1-Chlorooctane	66.5	% 28.3-16							
Comment of Chlores at also me	742	0/ 247.15	7						

Surrogate: 1-Chlorooctadecane 74.2 % 34.7-157

*=Accredited Analyte Cardinal Laboratories

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BBC International, Inc.

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

Fax To: (575) 397-0397

Received: 10/23/2017 Sampling Date: 10/23/2017

Reported: 10/30/2017 Sampling Type: Soil

Project Name: LOCO HILLS SWD PIPELINE Sampling Condition: Cool & Intact Project Number: Sample Received By: Tamara Oldaker NONE GIVEN

Project Location: 529 - MALJAMAR

Sample ID: WEST @ SURFACE (H702900-03)

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	10/27/2017	ND	1.72	86.1	2.00	0.774	
Toluene*	<0.050	0.050	10/27/2017	ND	1.72	85.8	2.00	0.184	
Ethylbenzene*	<0.050	0.050	10/27/2017	ND	1.72	86.2	2.00	0.0198	
Total Xylenes*	<0.150	0.150	10/27/2017	ND	5.15	85.8	6.00	0.319	
Total BTEX	<0.300	0.300	10/27/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.0	% 72-148	}						
Chloride, SM4500CI-B	mg/	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	10/26/2017	ND	432	108	400	0.00	
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	10/26/2017	ND	157	78.6	200	6.02	
DRO >C10-C28	<10.0	10.0	10/26/2017	ND	171	85.6	200	7.78	
EXT DRO >C28-C36	<10.0	10.0	10/26/2017	ND					
Surrogate: 1-Chlorooctane	62.0	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	65.5	% 34.7-15	7						

*=Accredited Analyte Cardinal Laboratories

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BBC International, Inc.

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

Fax To: (575) 397-0397

Received: 10/23/2017 Sampling Date: 10/23/2017

Reported: 10/30/2017 Sampling Type: Soil

Project Name: LOCO HILLS SWD PIPELINE Sampling Condition: Cool & Intact Project Number: Sample Received By: Tamara Oldaker NONE GIVEN

Project Location: 529 - MALJAMAR

Sample ID: SOUTH @ SURFACE (H702900-04)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/28/2017	ND	1.72	86.1	2.00	0.774	
Toluene*	<0.050	0.050	10/28/2017	ND	1.72	85.8	2.00	0.184	
Ethylbenzene*	<0.050	0.050	10/28/2017	ND	1.72	86.2	2.00	0.0198	
Total Xylenes*	<0.150	0.150	10/28/2017	ND	5.15	85.8	6.00	0.319	
Total BTEX	<0.300	0.300	10/28/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.0 %	72-148							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	10/26/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/26/2017	ND	157	78.6	200	6.02	
DRO >C10-C28	<10.0	10.0	10/26/2017	ND	171	85.6	200	7.78	
EXT DRO >C28-C36	<10.0	10.0	10/26/2017	ND					
Surrogate: 1-Chlorooctane	77.0 %	² / ₆ 28.3-16	4						
Surrogate: 1-Chlorooctadecane	82.49	% 34 7-15	7						

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Notes and Definitions

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch

accepted based on LCS and/or LCSD recovery and/or RPD values.

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

Cardinal Laboratories *=Accredited Analyte

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ARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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Company value. DDC IIItelliational, iiic.	P.O. #:		
Project Manager. Cili Diurison			
Address: P.O. Box 805			
City: Hobbs State: NM	Zip: 88241 Attn:	76	
5-397-6388 Fax #:	575-397-0397 Address:		
Project (er: Coc	to X	
11.11	State: Zip:	7	
Project Name:	Phone #:	2	
Project Location: Suf-fred 126	CR Eav #:	7	
Sampler Name: 1/0	DDESERV SAMPLING	7	
Lab I.D. Sample I.D.	UDGE THER: CID/BASE: E / COOL THER:	TP	
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3 hest & sen	C(7 × 10.23 123		
Caudo and Cababa and client's exclusive remed	numbers where and rilwork exclusive remedy for any claim arising whether based in contract or fort, shall be limited to the amount paid by the client by the	ent for the	

Sample Condition
Cool Intact
Pres Pres
No No

CHECKED BY:

Sampler - UPS - Bus - Other:

Delivered By: (Circle One) 3.4 2

Time:

Received By:

REMARKS:

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



February 14, 2018

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: LOCO HILLS SWD

Enclosed are the results of analyses for samples received by the laboratory on 02/08/18 15:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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)

Celey D. Keine

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 02/08/2018 Sampling Date: 01/30/2018

Reported: 02/14/2018 Sampling Type: Soil

Project Name: LOCO HILLS SWD Sampling Condition: Cool & Intact Project Number: NONE GIVEN Sample Received By: Tamara Oldaker

Project Location: 529 - MALJAMAR

Sample ID: 1 (H800411-01)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/09/2018	ND	1.75	87.4	2.00	23.7	
Toluene*	<0.050	0.050	02/09/2018	ND	1.77	88.5	2.00	22.3	
Ethylbenzene*	< 0.050	0.050	02/09/2018	ND	1.76	87.9	2.00	23.4	
Total Xylenes*	<0.150	0.150	02/09/2018	ND	5.25	87.5	6.00	22.5	
Total BTEX	<0.300	0.300	02/09/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	115 %	6 72-148	}						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	02/12/2018	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	02/13/2018	ND	198	98.8	200	9.18	
DRO >C10-C28*	<10.0	10.0	02/13/2018	ND	199	99.3	200	11.2	
EXT DRO >C28-C36	<10.0	10.0	02/13/2018	ND					
Surrogate: 1-Chlorooctane	85.0 9	% 41-142							
Surrogate: 1-Chlorooctadecane	84.2 9	% 37.6-14	7						

Surrogate: 1-Chlorooctadecane

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BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 02/08/2018 Sampling Date: 01/30/2018

Reported: 02/14/2018 Sampling Type: Soil

Project Name: LOCO HILLS SWD Sampling Condition: Cool & Intact Project Number: Sample Received By: NONE GIVEN Tamara Oldaker

Project Location: 529 - MALJAMAR

Sample ID: 2 (H800411-02)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2018	ND	1.75	87.4	2.00	23.7	
Toluene*	<0.050	0.050	02/10/2018	ND	1.77	88.5	2.00	22.3	
Ethylbenzene*	<0.050	0.050	02/10/2018	ND	1.76	87.9	2.00	23.4	
Total Xylenes*	<0.150	0.150	02/10/2018	ND	5.25	87.5	6.00	22.5	
Total BTEX	<0.300	0.300	02/10/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	112 9	% 72-148	}						
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	02/12/2018	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	02/13/2018	ND	198	98.8	200	9.18	
DRO >C10-C28*	<10.0	10.0	02/13/2018	ND	199	99.3	200	11.2	
EXT DRO >C28-C36	<10.0	10.0	02/13/2018	ND					
Surrogate: 1-Chlorooctane	82.8	% 41-142	!						
Surrogata: 1 Chloroctadacana	82.1	9/ 37.6.14	7						

82.4 % Surrogate: 1-Chlorooctadecane 37.6-147

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BBC International, Inc. Cliff Brunson P.O. Box 805

Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 02/08/2018 Sampling Date: 01/30/2018

Reported: 02/14/2018 Sampling Type: Soil

Project Name: LOCO HILLS SWD Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Tamara Oldaker

Project Location: 529 - MALJAMAR

Sample ID: 3 (H800411-03)

BTEX 8021B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2018	ND	1.75	87.4	2.00	23.7	
Toluene*	<0.050	0.050	02/10/2018	ND	1.77	88.5	2.00	22.3	
Ethylbenzene*	<0.050	0.050	02/10/2018	ND	1.76	87.9	2.00	23.4	
Total Xylenes*	<0.150	0.150	02/10/2018	ND	5.25	87.5	6.00	22.5	
Total BTEX	<0.300	0.300	02/10/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 5	% 72-148	}						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/12/2018	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	02/13/2018	ND	198	98.8	200	9.18	
DRO >C10-C28*	<10.0	10.0	02/13/2018	ND	199	99.3	200	11.2	
EXT DRO >C28-C36	<10.0	10.0	02/13/2018	ND					
Surrogate: 1-Chlorooctane	81.8	% 41-142	?						
Commenter 1 Chlores et al.	70.0	0/ 27 / 14	7						

Surrogate: 1-Chlorooctadecane 78.8 % 37.6-147

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BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241

Fax To: (575) 397-0397

Received: 02/08/2018 Sampling Date: 01/30/2018

Reported: 02/14/2018 Sampling Type: Soil

Project Name: LOCO HILLS SWD Sampling Condition: Cool & Intact Project Number: Sample Received By: NONE GIVEN Tamara Oldaker

Project Location: 529 - MALJAMAR

Sample ID: 4 (H800411-04)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2018	ND	1.75	87.4	2.00	23.7	
Toluene*	<0.050	0.050	02/10/2018	ND	1.77	88.5	2.00	22.3	
Ethylbenzene*	<0.050	0.050	02/10/2018	ND	1.76	87.9	2.00	23.4	
Total Xylenes*	<0.150	0.150	02/10/2018	ND	5.25	87.5	6.00	22.5	
Total BTEX	<0.300	0.300	02/10/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	112 9	% 72-148	}						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/12/2018	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	02/13/2018	ND	198	98.8	200	9.18	
DRO >C10-C28*	<10.0	10.0	02/13/2018	ND	199	99.3	200	11.2	
EXT DRO >C28-C36	<10.0	10.0	02/13/2018	ND					
Surrogate: 1-Chlorooctane	73.0	% 41-142	?						

Surrogate: 1-Chlorooctadecane 71.4 % 37.6-147

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Notes and Definitions

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch

accepted based on LCS and/or LCSD recovery and/or RPD values.

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

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

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

recovery.

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

Cardinal Laboratories *=Accredited Analyte

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Celeg D. Kreene



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Sampler Name: Project Location: Project Name: city: Hobbs Project Manager: Cliff Brunson Company Name: BBC International, Inc. Project #: Phone #: 575-397-6388 Address: P.O. Box 805 Lab I.D. FOR LAB USE ONLY (505) 393-2326 FAX (505) 393-2476 Sample I.D. Project Owner: Fax #: 575-397-0397 State: NM (G)RAB OR (C)OMP # CONTAINERS 88241 GROUNDWATER WASTEWATER MATRIX SOIL OIL SLUDGE City: OTHER State: Attn: P.O. #: Phone #: Address: Company: ACID/BASE PRESERV ICE / COOL OTHER BILL TO Zip: SAMPLING TIME ANALYSIS REQUEST

Sampler - UPS - Bus - Other: Relinquished By: Relinquished By: Delivered By: (Circle One) Date://31/18 Cool Intact
Tyes Tyes
No No Received By: Received By: Sample Condition Cool Intact loss of use, or loss of profits 9 CHECKED BY: Phone Result: Fax Result: REMARKS: □ Yes O No Add'l Phone #: Add'l Fax #:

PLEASE NOTE: Liability and Damages, Cardin analyses. All claims including those for negliger

shall be dee

ed by Cardinal within 30 days after co

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service. In no eyent shall Cardinal be

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

(A)

From: Yu, Olivia, EMNRD

To: <u>Cliff Brunson</u>; <u>aaarias@blm.gov</u>; <u>Shelly Tucker</u>

 Cc:
 Becky Haskell; Ken Swinney; Jennifer Gilkey; Kathy Purvis

 Subject:
 RE: COG Loco Hills SWD - Delineation Workplan

Date: Tuesday, December 19, 2017 10:36:58 AM

Attachments: approved 1RP4493 Delineation Workplan Loco Hills SWD Pipeline.pdf

Email notification (C-141 Initial) Loco Hills SWD Pipeline.pdf

Mr. Brunson:

This release was issued a 1RP-4493 on February 24, 2017. See attachment.

One question: was the water table tagged at 65 ft. bgs for SB1?

NMOCD approves of the delineation completed and proposed remediation for 1RP-4493. Confirmation sidewall samples tested for BTEX, TPH extended, and chlorides are required. In the remediation report, please include an appropriately scaled map with the release point and confirmation sample locations demarcated with GPS coordinates.

Like approval from BLM required.

Thanks,

Olivia Yu Environmental Specialist NMOCD, District I Olivia.yu@state.nm.us 575-393-6161 x113

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 [mailto:cbrunson@bbcinternational.com]

Sent: Thursday, November 16, 2017 1:51 PM

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

Cc: Becky Haskell <rhaskell@concho.com>; Ken Swinney <kswinney@bbcinternational.com>; Jennifer Gilkey <jgilkey@bbcinternational.com>; Kathy Purvis <kathy@bbcinternational.com>

Subject: COG Loco Hills SWD - Delineation Workplan

Olivia, Art, and Shelly,

Please find the attached Delineation Workplan and remediation proposal for the COG Loco Hills SWD Pipeline release site. COG is requesting that you review this plan and is looking forward to both 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

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From: Arias, Arthur To: Yu, Olivia, EMNRD

Cliff Brunson; Shelly Tucker; Becky Haskell; Ken Swinney; Jennifer Gilkey; Kathy Purvis

Subject: Re: COG Loco Hills SWD - Delineation Workplan Date: Tuesday, December 19, 2017 10:58:58 AM

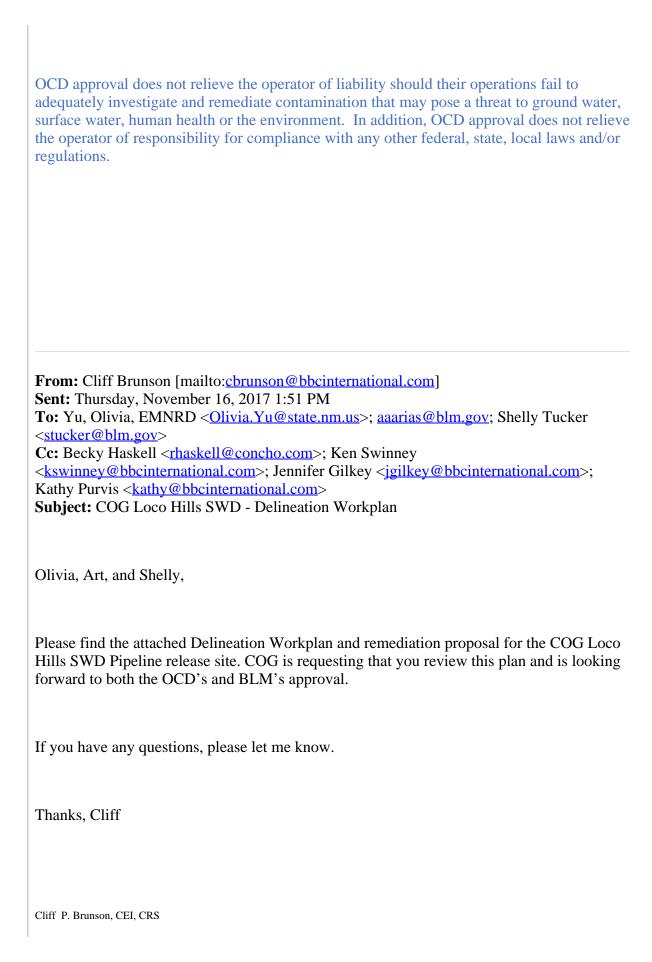
BLM approves the delineation work plan. Keep us informed when the work has been completed... Thank You....

Arthur Arias aaarias@blm.gov

575-393-6161 x113

Environmental Protection Specialist Bureau Of Land Management, Carlsbad Field Office 575-234-6230 Cell 575-499-3378

On Tue, Dec 19, 2017 at 10:36 AM, Yu, Olivia, EMNRD < Olivia. Yu@state.nm.us > wrote:
Mr. Brunson:
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Like approval from BLM required.
Thanks,
Olivia Yu
Environmental Specialist
NMOCD, District I
Olivia.yu@state.nm.us



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