



May 20, 2016

Oil Conservation Division District 2 – Artesia 811 S. First St. Artesia, NM 88210

Re: Loco Hills SWD Mainline Sec. 24, T17S-R30E Eddy County, NM

Mr. Mike Bratcher,

COG Operating LLC would like to submit for your consideration the enclosed work plan for the above captioned well. The plan is in response to the C-141 Initial report dated May 21, 2015.

# **Background**

The release was caused when A.R.C. Power-Line Construction drilled into COG's Loco Hills SWD Mainline while setting a power pole for an Apache Corporation Facility. An area measuring approximately 9340 square feet was impacted to the north of the Apache facility. A hydrovac crew was called into daylight buried lines. In addition to the 8" COG SWD line, 4 other lines belonging to Frontier and Burnett were discovered. Frontier will not allow excavation within 15' of a buried pipeline.

# Groundwater

Based on the Chevron Trend Maps, the release area would be classified at a site ranking of Zero due to the depth of groundwater at approximately 350'. No well information could be found for Section 24.

# Soil Assessment and Analytical Results

Initial soil samples were taken on 6/4/2015. Soil texture is classified as fine sand per NRCS Soil Survey. Samples indicated TPH and BTEX were within RRALs for site ranking zero. Chloride concentrations are within tolerable limits for surface reclamation. (see attached site diagram)

### Site Ranking: Zero

Depth to GW per Trend Map: 350'											
51	DRO	GRO	TPH	BTIEX	CI-						
1'	< 10.0	< 10.0	< 10.0	<0.300	<16.0						
3'	< 10.0	< 10.0	< 10.0	<0.300	4240						
4'	< 10.0	< 10.0	< 10.0	<0.300	5200						
5'	MARCH TRACE		STEEL VALUE		1200						
6'					768						
7'			7	ALC:	1090						
8'				The second	656						
52	DRO	GRO	TPH	BTEX	CI-						
52 1'		GRO < 10.0		O.300	CI- 1300						
The Real Property lies and the least of the	142		142		1300						
1'	142 101	< 10.0	142 101	<0.300	1300 368						
1' 2'	142 101	< 10.0 < 10.0	142 101	<0.300 <0.300	1300 368						
1' 2' 3'	142 101	< 10.0 < 10.0	142 101	<0.300 <0.300	1300 368 976						
1' 2' 3' 4'	142 101	< 10.0 < 10.0	142 101	<0.300 <0.300	1300 368 976 3680						
1' 2' 3' 4' 6'	142 101	< 10.0 < 10.0	142 101	<0.300 <0.300	1300 368 976 3680 1720						

# **Work Plan**

This location has 5 buried lines in a low lying area amongst scarce vegetation consistent with the surrounding dunal complex. Ground water is at a depth greater than 350' per the Chevron Trend Maps. COG proposes that no excavation take place, but monitor the area in an effort to achieve long term vegetative growth. Seeding would be completed in June of 2016 with BLM Seed Mixture #4 and LPC. If weed free organic matter is available it will be added to the soil and a stabilizing amendment. The site will be inspected in September 2016, May 2017 and June 2017 monitoring of vegetative growth.

If there are no objections or further stipulations, COG Operating LLC would like to begin the remediation process based on approval of this work plan. Please feel free to contact my with any questions or concerns at (505) 350-1336

Sincerely,

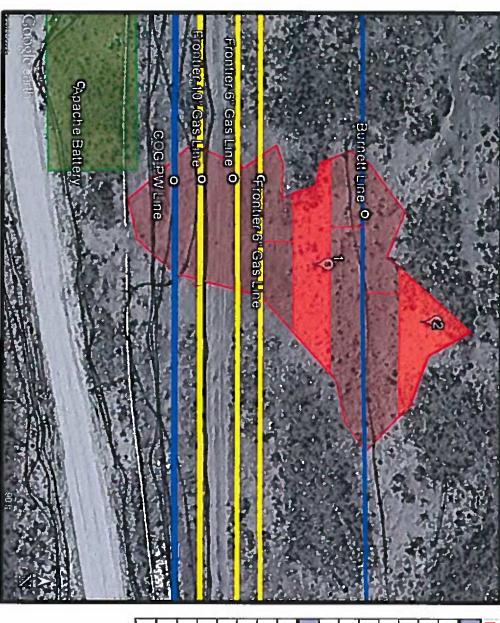
Amanda Trujillo Davis

Senior Environmental Coordinator

**Enclosed:** 

Site Diagram and Summary Table

**Laboratory Analysis** 



es (1993)	D Guidelin	Bold values exceed RRALs per NMOCD Guidelines (1993)	ed RRALs	alues exce	Bold v
544					œ
2200		3.0			7'
1720					6
3680					4
976	81.9 < 0.300	81.9	81.9 < 10.0	81.9	ω
368	101 < 0.300	101	101 < 10.0	101	2'
1300	<0.300	142	142 < 10.0	142	1'
Cļ-	ВТЕХ	TPH	GRO	DRO	<b>S2</b>
656					ω <u>̃</u>
1090					7'
768					<u>6</u>
1200					νĩ
5200	<0.300	< 10.0	< 10.0	< 10.0	4
4240	<0.300	< 10.0	< 10.0	< 10.0	μ
<16.0	<0.300	< 10.0	< 10.0	< 10.0	1'
Cl-	BTEX	ТРН	GRO	DRO	S1
		p: 350'	Trend Ma	Depth to GW per Trend Map: 350'	Depth 1
			U	Site Ranking: Zero	Site Ra





June 12, 2015

AMANDA TRUJILLO

**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 06/08/15 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

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

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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 AMANDA TRUJILLO P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received: Reported: 06/08/2015

06/12/2015

Project Number:

LOCO HILLS SWD MAINLINE

Reporting Limit

16.0

Reporting Umit

16.0

Reporting Limit

16.0

Project Number: Project Location:

Analyte

Analyte

Analyte

NONE GIVEN

NOT GIVEN

Sampling Date:

te: 06/04/2015 pe: Soil

Sampling Type:

104

% Recovery

104

104

Sampling Condition: Cool & Intact

Sample Received By: Jodi Henson

Sample ID: S2 4' (H501464-01)

Chloride, SM4500CI-B

Chloride

Chloride

Chloride

mg/kg

Result

3680

Result

1720

Result

2200

Analyzed By: AP

Analyzeu by: Al

06/11/2015

Analyzed

06/11/2015

Analyzed

06/11/2015

06/11/2015

Analyzed

Method Blank

ND

Method Blank

ND

BS % I

% Recovery True Value QC

RPD Qualifier

3,92

RPD

3.92

Sample ID: S2 6' (H501464-02)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

\_\_\_

BS

416

416

True Value QC

400

400

400

Sample ID: S2 7' (H501464-03)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyzed

Method Blank

ND

BS

416

% Recovery True Value QC

RPD

3.92

Qualifier

Qualifier

Sample ID: S2 8' (H501464-04)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyte	Result	Reporting Limit
Chloride	544	16.0

Analyzed I

Method Blank ND BS 416 % Recovery

True Value QC 400 RPD Qualifier 3.92

Cardinal Laboratories

\*=Accredited Analyte

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Celleng & Kenne

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 4



## **Notes and Definitions**

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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Celen & Kune



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

TIME XXXXX C/	Company Name: / OS Operation / LC	0/47/16	ANALYSIS REQUEST
State: Zip: Attn: Address:  Project Owner: Project Owner: Clly:  Project Owner: Clly: Address: Clly:  Clly: State: Zip: Address: Clly: State: Zip: Phone #:  Phone #: Preserv. Sample I.D.  Sample I.D.  Sample I.D.  Soil.  OIL  SLUDGE  OTHER: ACID/BASE: ICE / COOL  OTHER: ACID/	roject Manager: Dawn		- 1
State: Zip: Attn: Abbort Caubas  Fax #: Address: Address: City: State: Zip: State: Zip: Phone #: Preserv Soil.  Sample I.D. (G)RAB OR (C)OMP  WASTEWATER WASTEWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL		Company: COG	
Sample I.D.  Address:  City:  C	State:	Attn:	
Sample I.D.  Sample I.D.  Sample I.D.  State: Zip:  State		Address:	
Sample I.D.  State: Zip:  Phone #:  Fax #:  Fax #:  Fax #:  ACID/BASE: ICE / COOL.  OTHER:  DATE  TIME  TIME	roject #: Project Owner:		
Sample i.D.  Fax #:  Fax #	roject Name: LOCOHILLS SWD MG	State:	
Sample I.D.  Sampl	roject Location:		
Sample I.D.  Sample I.D.  Sample I.D.  WATRIX  GROUNDWATER  WASTEWATER  WASTEWATER  SOIL  OIL  SLUDGE  OTHER:  ACID/BASE: ICE / COOL  OTHER:  VIII6 1.D.  IME	ampler Name: ANAUNA TANIO	TI DE X	
Sample I.D.  Sample I.D.  Sample I.D.  Sample I.D.  Sample I.D.  Scontainers  GROUNDWATER  WASTEWATER  WASTEWATER  SOIL  OIL  SLUDGE  OTHER:  ACID/BASE: ICE / COOL  OTHER:  DATE  TIME	FOR LABORATED AT A STREET BASE BASE BASE BASE BASE BASE BASE BASE	PRESERV	
200 200 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Sample I.D.	# CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER: DATE	
* * * * * * * * * * * * * * * * * * *	SD 4	8 JILM	
\$32 <b>%</b>	7.e.	**	
	32 8:	×	

Delivered By: (Circle One) 080 Time: Sample Condition Cool Intact Yes Pres CHECKED BY: Phone Result: Fax Result: REMARKS: O Yes

□ No Add'I Phone #:

Sampler - UPS - Bus - Other:

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393232654

Page 4 of 4



June 12, 2015

**AMANDA TRUJILLO** 

**COG OPERATING** 

P. O. BOX 1630

ARTESIA, NM 88210

**RE: LOCO HILLS SWD MAINLINE** 

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Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

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Sincerely,

Celey D. Keene

Lab Director/Quality Manager



COG OPERATING **AMANDA TRUJILLO** P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:

06/08/2015

06/12/2015

Reported: Project Name:

LOCO HILLS SWD MAINLINE

Project Number:

NONE GIVEN

**Project Location:** 

Analyte

Analyte

Analyte

Analyte

**NOT GIVEN** 

Sampling Date:

06/04/2015 Soil

Sampling Type: Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S1 5' (H501463-01)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Analyzed

Method Blank

BS % Recovery

104

True Value QC

RPD Qualifier

Chloride

1200

Result

16.0

Reporting Limit

Reporting Limit

06/11/2015

ND

416

400

3.92

Sample ID: S1 6' (H501463-02)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

% Recovery

True Value QC

Chloride

768

Result

16.0 06/11/2015 Method Blank ND

85 416

104

400

RPD Qualifier 3.92

Sample ID: S1 7' (H501463-03)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AP

Reporting Limit

Reporting Limit

16.0

Analyzed

Analyzed

Method Blank

BS

% Recovery True Value QC

RPD 3.92 Qualifier

Chloride

Chloride

Result 1090

Result

656

16.0

06/11/2015

Analyzed

06/11/2015

ND

416

104

400

Sample ID: S1 8' (H501463-04)

Chioride, SM4500CI-B

mg/kg

Analyzed By: AP

Method Blank ND

BS 416 % Recovery

104

True Value QC 400

RPD

3.92

Qualifier

Cardinal Laboratories

\*=Accredited Analyte

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Cellen Thema-

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 4



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# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (576) 393-2476

Company Name: COS Operation		ANALYSIS REQUEST
Project Manager: Amonda Thirle	P.O. #:	
	Company: @G	
City: State:	Zip: Attn: Robert-Grubts	
Phone #:	Address:	
Project #: Project Owner	City:	
Project Name: LOCO HILL SWO High I'M	Jin line State: Zip:	
Project Location:	Phone #:	
Sampler Name: AMANDA TRAILE	Fax #:	
	MATRIX PRESERV SAMPLING	
Lab i.D. Sample I.D.	(G)RAB OR (C)OMF CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE ICE / COOL OTHER:	
- SI S.	×	
2 51 6'		
3 1 7	X 25000 X	
4 20	X 4/18/10 X	
e Producti di Sermata primondora. Producti sobbitato meteronte di datamente del primondo primo, primoprimo primondo prin		

Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Relinquished By:	aff. it	1	Relinguished By:	officies or successors arming out of or related to the perfering
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CHECKED BY:			noon			upon any of the above stated rea
			REMARKS:	Fax Result:	Phone Result:	econs or convenien.
				□ Yes	□ Yes	
				O No	No	
				D No Add'I Fax #:	Add'l Phone #:	



June 09, 2015

**AMANDA TRUJILLO** 

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

**RE: LOCO HILLS SWD MAINLINE** 

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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.

Celeg D. Keine

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Sincerely,

Celey D. Keene

Lab Director/Quality Manager



COG OPERATING AMANDA TRUJILLO P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:

06/08/2015

Reported:

06/09/2015

Project Name:

LOCO HILLS SWD MAINLINE

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

06/04/2015

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S1 1' (H501462-01)

BTEX 8021B	mg/kg		Analyze	d By: MS	ingly BS 04 Decourse.				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	< 0.050	0.050	06/08/2015	ND	2.37	119	2.00	0.939	
Toluene*	<0.050	0.050	06/08/2015	ND	2.15	107	2.00	1.69	
Ethylbenzene*	<0.050	0.050	06/08/2015	ND	2.04	102	2.00	1.16	
Total Xylenes*	<0.150	0.150	06/08/2015	ND	5.97	99.4	6.00	1.66	
Total BTEX	<0.300	0.300	06/08/2015	ND					
Surrogate 4-Bromofluorobenzene (PIL	110%	6 61-154							
Chloride, SM4500Cl-B	mg/	mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/09/2015	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/08/2015	ND	184	92.1	200	1.44	
DRO >C10-C28	<10.0	10.0	06/08/2015	ND	182	91.2	200	1.62	
Surrogate: 1-Chlorooctane	89.89	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	96.3 %	6 52.1-17	5						

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\*=Accredited Analyte

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Callege T. Keens



COG OPERATING **AMANDA TRUJILLO** P. O. BOX 1630 ARTESIA NM, 88210 NONE Fax To:

Received:

06/08/2015

Reported:

06/09/2015

Project Name:

LOCO HILLS SWD MAINLINE

Project Number:

**NONE GIVEN** 

Project Location:

**NOT GIVEN** 

Sampling Date:

06/04/2015

Soil

Sampling Type: Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S1 3' (H501462-02)

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	06/08/2015	ND	2.37	119	2.00	0.939	
Toluene*	<0.050	0.050	06/08/2015	ND	2.15	107	2.00	1.69	
Ethylbenzene*	<0.050	0.050	06/08/2015	ND	2.04	102	2.00	1.16	
Total Xylenes*	<0.150	0.150	06/08/2015	ND	5.97	99.4	6.00	1.66	
Total BTEX	<0.300	0.300	06/08/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIL	110 %	6 61-154							
Chloride, SM4500CI-B	mg/	mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4240	16.0	06/09/2015	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/08/2015	ND	184	92.1	200	1.44	
DRO >C10-C28	<10.0	10.0	06/08/2015	ND	182	91.2	200	1.62	
Surrogate 1-Chlorooctane	86.5 %	6 47,2-157	7						
Surrogate: 1-Chlorooctadecane	91.99	6 52,1-176	i						

# Cardinal Laboratories

\*=Accredited Analyte

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Celego treams



COG OPERATING AMANDA TRUJILLO P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:

06/08/2015

Reported:

06/09/2015

Project Name:

LOCO HILLS SWD MAINLINE

Project Number:

NONE GIVEN

Project Location:

**NOT GIVEN** 

Sampling Date:

06/04/2015

Sampling Type:

Soll

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S1 4' (H501462-03)

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	06/08/2015	ND	2.37	119	2.00	0.939	
Toluene*	<0.050	0.050	06/08/2015	ND	2.15	107	2.00	1.69	
Ethylbenzene*	<0.050	0.050	06/08/2015	ND	2.04	102	2.00	1.16	
Total Xylenes*	<0.150	0.150	06/08/2015	ND	5.97	99.4	6.00	1.66	
Total BTEX	<0.300	0.300	06/08/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	61-154				•			
Chloride, SM4500CI-B	mg/	kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5200	16.0	06/09/2015	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/08/2015	ND	184	92.1	200	1.44	
DRO >C10-C28	<10.0	10.0	06/08/2015	ND	182	91.2	200	1.62	
Surrogate I-Chlorooctane	84.3	% 47.2-15	7			· · · · · · · · · · · · · · · · · · ·			
Surrogate: 1-Chlorooctadecane	87.85	52.1-17	5						

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Celeny & Keens



COG OPERATING AMANDA TRUJILLO P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:

06/08/2015

Reported:

06/09/2015

Project Name:

LOCO HILLS SWD MAINLINE NONE GIVEN

Project Number: Project Location:

NOT GIVEN

Sampling Date:

06/04/2015

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S2 1' (H501462-04)

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	06/09/2015	ND	2.37	119	2.00	0.939	
Toluene*	<0.050	0.050	06/09/2015	ND	2.15	107	2.00	1.69	
Ethylbenzene*	<0.050	0.050	06/09/2015	ND	2.04	102	2.00	1.16	
Total Xylenes*	<0.150	0.150	06/09/2015	ND	5.97	99.4	6.00	1.66	
Total BTEX	<0.300	0.300	06/09/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIL	106	% 61-15+							
Chloride, SM4500CI-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1300	16.0	06/09/2015	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/08/2015	ND	184	92.1	200	1.44	
DRO >C10-C28	142	10.0	06/08/2015	ND	182	91.2	200	1.62	
Surrogate: 1-Chlorooctane	84.4	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	104 9	% 52.1-17	5						

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Celegy treens



COG OPERATING AMANDA TRUJILLO P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:

06/08/2015

Reported:

06/09/2015

Project Name:

LOCO HILLS SWD MAINLINE

Project Number: Project Location:

NONE GIVEN

NOT GIVEN

Sampling Date:

06/04/2015

Sampling Type:

Soil

Sampling Condition:

Cool & Intact Jodi Henson

Sample Received By:

Sample ID: S2 2' (H501462-05)

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	06/09/2015	ND	2.37	119	2.00	0.939	
Toluene*	<0.050	0.050	06/09/2015	ND	2.15	107	2.00	1.69	
Ethylbenzene*	<0.050	0.050	06/09/2015	ND	2.04	102	2.00	1.16	
Total Xylenes*	<0.150	0.150	06/09/2015	ND	5.97	99.4	6.00	1.66	
Total BTEX	<0.300	0.300	06/09/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIE	107 9	61-154				_			
Chloride, SM4500CI-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	06/09/2015	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/08/2015	ND	184	92.1	200	1.44	
DRO >C10-C28	101	10.0	06/08/2015	ND	182	91.2	200	1.62	
Surrogate: 1-Chlorooctane	89.0 9	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	106 %	6 52.1-170	5						

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Calley L. trans



COG OPERATING AMANDA TRUJILLO P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:

06/08/2015

Reported:

06/09/2015

Project Name:

LOCO HILLS SWD MAINLINE

Project Number: Project Location:

NONE GIVEN

Sampling Date:

06/04/2015

Sampling Type: Sampling Condition: Soil Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: 52 3' (H501462-06)

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	06/09/2015	ND	2.37	119	2.00	0.939	
Toluene*	<0.050	0.050	06/09/2015	ND	2.15	107	2.00	1.69	
Ethylbenzene*	<0.050	0.050	06/09/2015	ND	2.04	102	2.00	1.16	
Total Xylenes*	<0.150	0.150	06/09/2015	ND	5.97	99.4	6.00	1.66	
Total BTEX	<0.300	0.300	06/09/2015	ND					
Surrogate: 4-Bromofluorobenzene (PIL	106 %	61-154					_		
Chloride, SM4500CI-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	976	16.0	06/09/2015	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/08/2015	ND	184	92.1	200	1.44	
DRO >C10-C28	81.9	10.0	06/08/2015	ND	182	91.2	200	1.62	
Surrogate 1-Chlorooctane	81.85	26 47,2-157	7				· · · · · · · · · · · · · · · · · · ·		
Surrogate: 1-Chlorooctadecane	94.29	% 52.1-176	;						

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Celegy treems -



## **Notes and Definitions**

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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Calego treens



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

	ANALYSIS REQUEST
P.O. #:	
Company: COG	
Attn: Robert Gmbb	
Address:	
City:	
TIBX	
MATRIX PRESERV SAMPLING	
TER	<b>&gt;</b>
WASTEWAT SOIL OIL SLUDGE OTHER: ACID/BASE	TAH RIE
X GAILS SIMA	XXX
	X
	8
	4000
-	XXX
	SLUDGE Company: COG Attn: Robert Gmbb Address: City: State: Zip: Phone #: PRESERV SAMPLING OTHER: OT

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Sample Condition Cool Intact Pres Inter No No

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

Relinquished By:

Time:

Received By:

from, toss of use, or tres of profile reserved by cherk, he subsidiered.

Phone Result: Fax Result: REMARKS:

☐ Yes ☐ No AddT Phone

eust!!