REMEDIATION WORK PLAN

Property:

Concho Operating, LLC.
Burch Keely Water Flood Satellite C
Eddy County, New Mexico
Unit Letter "H", Section 13, Township 17 South, Range 29 East
Latitude 32.8364334, Longitude -104.0220566
2RP-4052

September 2017

Prepared for:

Concho Operating, LLC.
600 West Illinois Avenue
Midland, TX 79701
Attn: **Mrs. Rebecca Haskell**

Prepared by:

Ryan Reich
Environmental Project Manager

Jack Zimmerman, P.G., C.P.G
Senior Geologist

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APPENDICES

WORK PLAN

Concho Operating, LLC.
Burch Keely Water Flood Satellite C
Eddy County, New Mexico
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September 2017

1.0 INTRODUCTION

1.1 Site Description & Background

American Safety Services Inc. (ASSI) has prepared this Work Plan for the Concho Operating, LLC. (COG) Burch Keely Water Flood Satellite C (referred to hereinafter as the "Site" or "subject Site"). This Work Plan is based upon the interpretation of the data collected by ASSI.

The Burch Keely Water Flood Satellite C is located in Unit Letter "H", Section 13, Township 17 South, Range 29 East, Eddy County, New Mexico (GPS 32.8364334, -104.0220566).

Remedial actions were conducted by ASSI in accordance with New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (NMOCD) rules (*NMAC 19.15.29 Release Notification*) and the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

1.2 Project Objective

The objective of the Work Plan is to present documentation of the activities that were performed to date and to request an effective means to remediate the Site.

1.3 Standard of Care

ASSI's services are performed in accordance with standards provided by a firm rendering the same or similar services in the area during the same time period. ASSI makes no warranties, express or implied, as to the services performed hereunder. Additionally, ASSI does not warranty the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services will be performed in accordance with the scope of work agreed with the client.

1.4 Reliance

This report has been prepared for the exclusive use of COG, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization of COG and ASSI. Any unauthorized distribution or reuse is at the sole risk of COG. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the report, and ASSI's Agreement. The limitation of liability defined in the agreement is the aggregate limit of ASSI's liability to the client.

2.0 SITE RANKING & PROPOSED REMEDIAL ACTION GOALS

The Site is subject to regulatory oversight by the NMOCD. To address activities related to releases, the NMOCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the NMOCD rules, specifically NMAC 19.15.29 *Release Notification*. These documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

In accordance with the NMOCD's *Guidelines for Remediation of Leaks, Spills and Releases*, ASSI utilized the general site characteristics to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the table below:

Ranking Criteria			**Ranking Score**
Depth to Groundwater	<50 feet	20	**0**
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area, <1,000 feet from a water source, or; <200 feet from private domestic water source.	Yes	20	**0**
	No	0	
Distance to Surface Water Body	<200 feet	20	**0**
	200 to 1,000 feet	10	
	>1,000 feet	0	
Total Ranking Score			**0**

Based on ASSI's evaluation of the scoring criteria, the Site would have a Total Ranking Score of 0. This ranking is based on the following:

- The depth to the initial groundwater-bearing zone is 150 – 200 feet at the Site.
- The impacted area is greater than 200 feet from a private domestic water source.
- Distance to the nearest surface water body is greater than 1,000 ft.

Based on a Total Ranking Score of 0, cleanup goals for soils remaining in place include: 10 milligrams per kilogram (mg/Kg) for Benzene, 50 mg/Kg for Total Benzene, Toluene, Ethylbenzene, and Xylene (BTEX), 5,000 mg/Kg for Total Petroleum Hydrocarbons (TPH), and 600 mg/Kg for Chloride.

Figures 1 and 2 show the location of COG's Burch Keely Water Flood Satellite C facility in Eddy County, New Mexico and surrounding topography.

3.0 INITIAL RESPONSE & ACTIVITIES

3.1 Initial Response

On January 9, 2017, COG and GCI Construction personnel collected samples by means of trenching using mechanical means (i.e., backhoe tractor) in an effort to vertically delineate existing Total Petroleum Hydrocarbon (TPH) and Chloride in soil. Sampling activities were in response to a reportable release directly to the ground that occurred on December 22, 2016. Fifteen (15) barrels (bbls) of crude oil and twenty-five (25) bbls of produced water was released caused by a leak on a buried flowline. Ten (10) bbls of crude oil and twenty (20) bbls of produced water were recovered. The release impacted approximately seven thousand (7000) square feet of pasture area (Figure 3).

3.2 Trenching activities

The January 9th sampling event achieved vertical delineation at sample locations T1, T2, T3, T4, and T5 for TPH only. Vertical delineation for existing Chloride in soil was achieved at sample locations T1, T2, T3, and T4. However, at sample location T5 vertical delineation was not achieved (Table 1).

Additional samples were collected at location T5 on April 20th in a second attempt to vertically delineate existing Chloride in soil. COG and GCI Construction personnel utilized mechanical means (i.e., track—excavator) to collect samples at depths below sixteen (16) feet below ground surface (bgs). The ending depth was twenty-six and one-half (26.5) feet bgs. Vertical delineation was, once again, not achieved (Table 1).

3.3 Drilling Activities

On July 27th ASSI and COG personnel along with Scarborough Drilling, utilizing air rotary drilling techniques, continued vertical delineation efforts below twenty-six and-one-half (26.5) feet bgs at location T5. Mr. Ryan Reich, an ASSI environmental professional, was present to document onsite activities (written and photographic).

One (1) soil boring (i.e., Soil Bore 1 @ T5), were advanced to vertically delineate Chloride below twenty-six and-one-half (26.5) feet bgs with proximity to location T5. A total of five (5) samples were collected from Soil Bore 1 @ T5 and were analyzed for Chloride only (Table 1).

While drilling operations were ongoing, discrete samples were collected from Soil Bore 1 @ T5 at the following depths: 30', 40', 50', 60', and 65', bgs. Vertical delineation was achieved at a depth of fifty (50) feet bgs. However, drilling/sampling activities continued

an additional fifteen (15) feet — to a depth of sixty-five (65) feet bgs. This action confirmed a downward trend in Chloride concentration levels as depth increased.

Soil was field screened for Chloride utilizing electro conductivity during drilling operations. Soil boring locations are shown on Figure 4.

3.4 Soil Sampling Analytical Results

Analytical results were compared to the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases* (Section VI A. Contaminated Soils) and show TPH and Chloride exceedances exist in soil above the NMOCD clean-up goals as discussed in Section 2.0 at sample locations. In the area of T1, Chloride was below regulatory guidelines, vertical delineation for TPH was achieved at two (2) feet bgs with a concentration of 18.5 mg/kg. In the area of T2, TPH was below regulatory guidelines, vertical delineation of Chloride was achieved at a depth of six (6) feet bgs with a concentration of 560 mg/kg. In the area of T3, TPH was below regulatory guidelines, vertical delineation of Chloride was achieved at a depth of four (4) feet with a concentration level of 48.0 mg/kg. In the area of T4, TPH was below regulatory guidelines, vertical delineation of Chloride was achieved at four (4) feet bgs with a concentration of 64.0 mg/kg. In the area of Soil Bore-1 @ T5 (T5), TPH was below regulatory guidelines, vertical delineation of Chloride was achieved at a depth of fifty (50) feet bgs with a concentration of 511.79 mg/Kg. All sample locations meet the NMOCD clean-up goal criteria.

4.0 LABORATORY ANALYTICAL METHODS

The samples were analyzed for TPH GRO/DRO utilizing EPA method SW-846 8015, BTEX using EPA method SW-846 8021B, and Chloride utilizing EPA method SW-846 300.1. Copies of the laboratory analysis are provided in Appendix D.

Soil was collected in laboratory prepared glassware, placed on ice, and packed in a cooler. The sample coolers and completed chain-of-custody forms were relinquished to Cardinal Laboratories in Hobbs New Mexico for the January 9th sampling event and to Xenco Laboratories in Midland, Texas for the April 20th and July 31st sampling events (Table 1).

Figure 4 shows the approximate location of the sampling (i.e., Soil Bore and Trench) locations.

5.0 WORK PLAN

Based upon the data collected and the work completed by ASSI, the constituents of concern (COC) (i.e., TPH and Chloride) has been vertically delineated at all the sample locations. Furthermore, laboratory analysis shows that COC concentrations are below the NMOCD clean-up goals (Table 1).

Based on the analytical data presented in Table 1, COG and ASSI propose to complete a removal action of the impacted material.

Figure 5 shows the excavation areas and proposed excavation depths based on analytical results. Locations of these areas are in relation to pertinent land features and general Site boundaries, which is included in Appendix A.

Excavations, as part of the proposed removal action, are as follows: specifically, in the area of T1, excavate to one (1) foot bgs, in the area of T2, excavate to two (2) feet bgs, for areas T3 and T4, excavate to three (3) feet bgs, and at Soil Bore 1 @ T5 (i.e. area of T5) excavate to four (4) feet bgs. Additionally, at location T5, a liner will be installed (approved 20 mil material thickness) at the bottom of the excavated area prior to backfilling. All material will be excavated (i.e., removed) by mechanical means, be temporarily stockpiled onsite and subsequently removed (hauled away) offsite to a proper disposal facility under appropriate manifest.

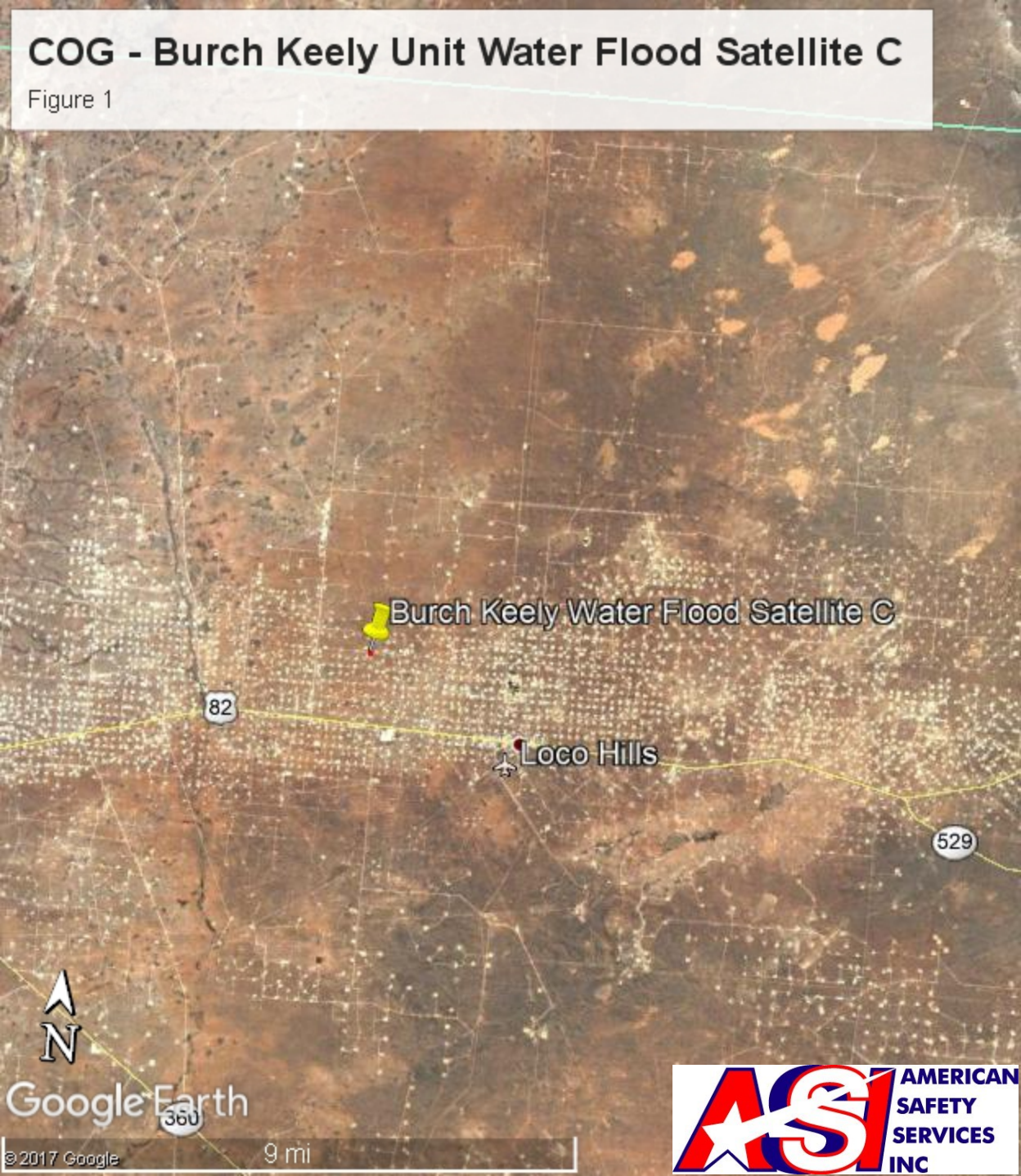
Prior to beginning backfilling operations, sidewall samples will be collected from each excavation in their prospective cardinal direction for Chloride only and submitted for laboratory analysis. The excavated areas will be backfilled to grade with clean imported material and the surface grade contoured to the surrounding landscape.

APPENDIX A

Figures

COG - Burch Keely Unit Water Flood Satellite C

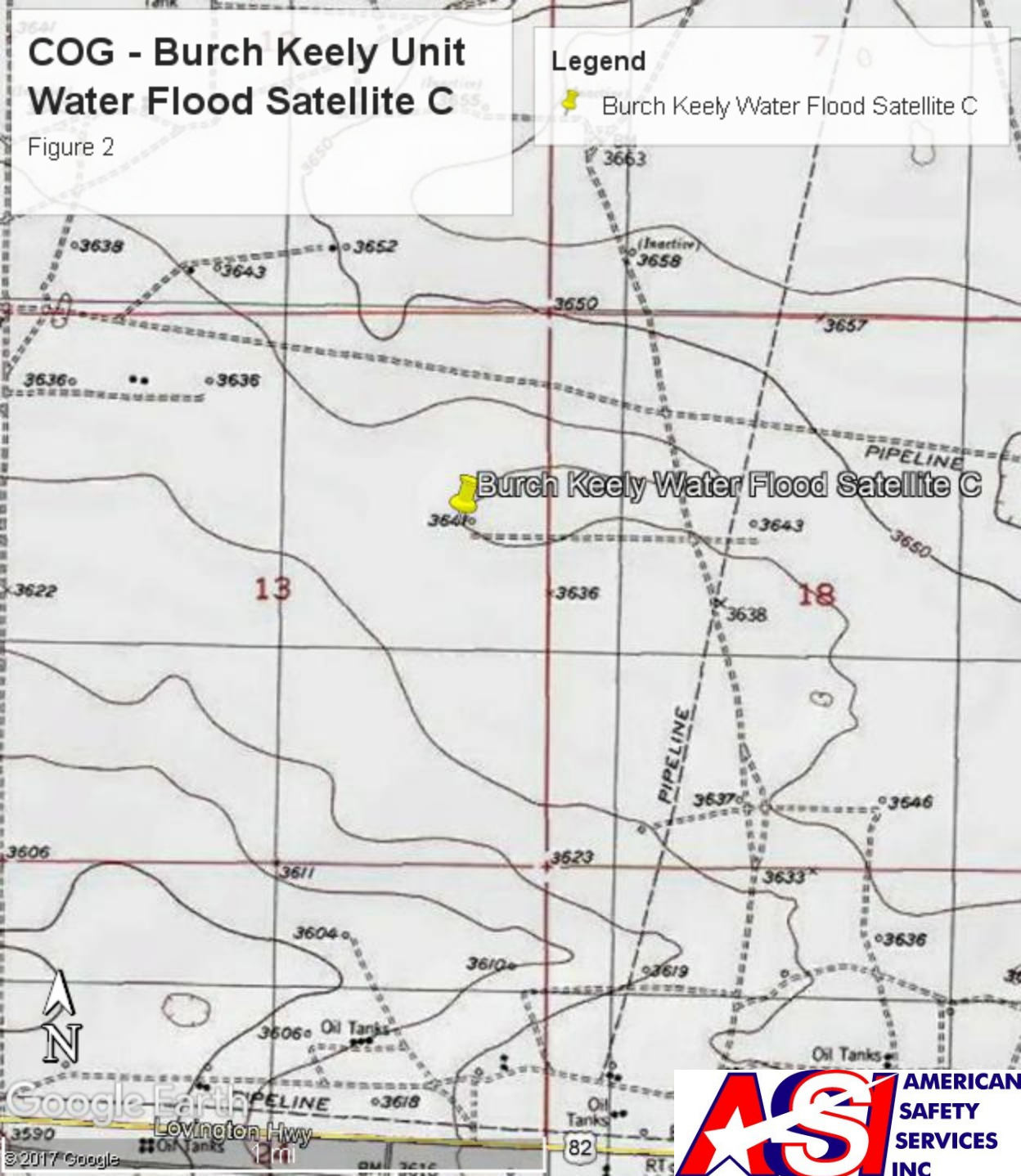
Figure 1



AMERICAN SAFETY SERVICES INC

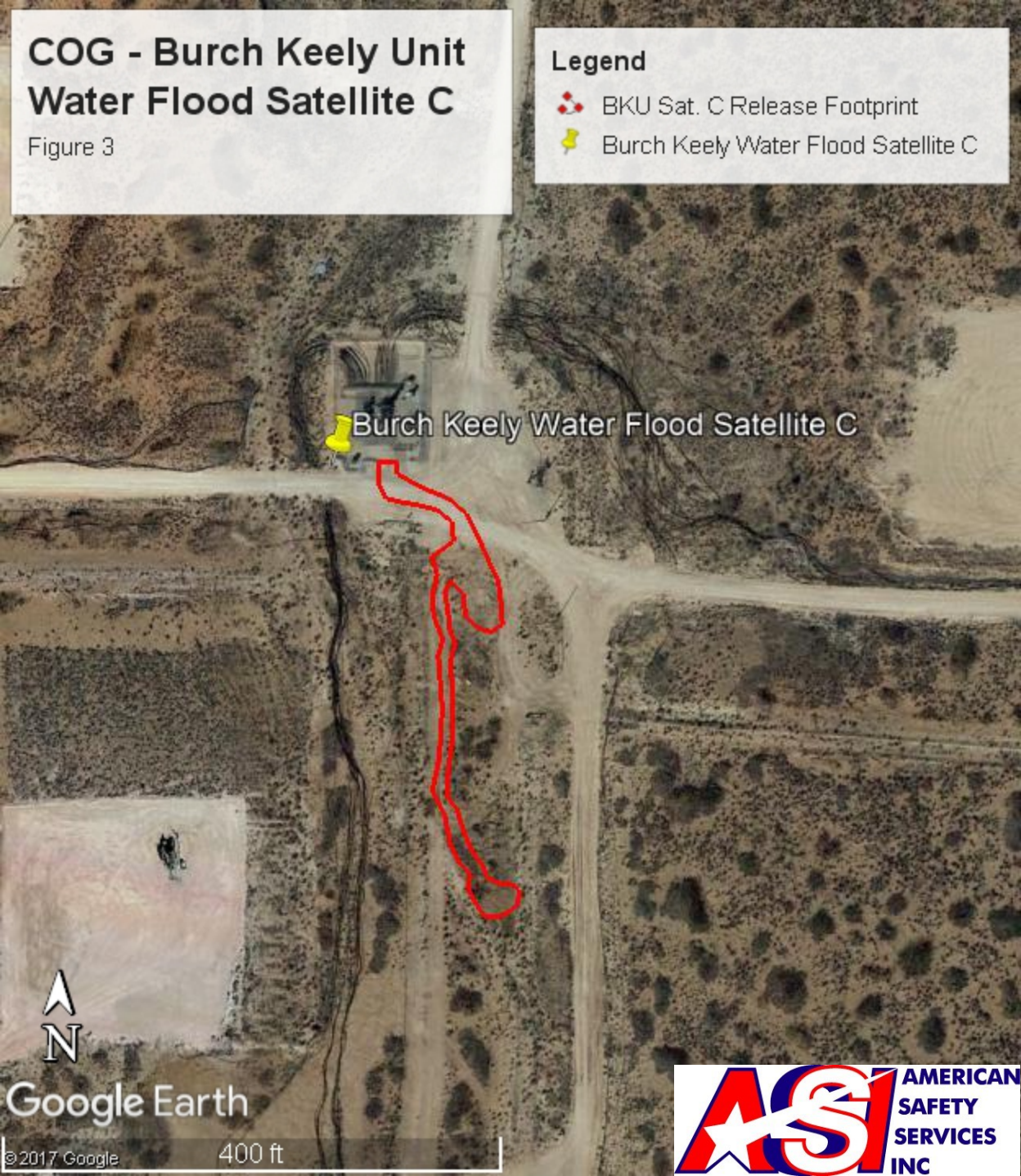
COG - Burch Keely Unit Water Flood Satellite C

Figure 2



COG - Burch Keely Unit Water Flood Satellite C

Figure 3



AMERICAN SAFETY SERVICES INC

BKU Water Flood Satellite C
Production Facility

N

35'

T1

68'

T2

40'

T3

15'

310'

T5 (Soil Bore 5@T5)

10' - 15' wide

35'

30'

T4

Legend

Lease Road

Sample Point

Concho Operating, LLC. -
BKU Water Flood Satellite C
Eddy County, New Mexico
32.8364N, -104.0220W

American Safety Services, Inc
8715 Andrews Hwy
Odessa, TX 79765
Phone: (432) 552-7625

FIGURE 4

Trench and Soil Bore Locations

BKU Water Flood Satellite C
Production Facility

N

35'

T1

68'

T2

40'

T3

15'

310'

T5 (Soil Bore 5@T5)

10' - 15' wide

35'

30'

T4

Legend

- 1'
- 2'
- 3'
- 4' with liner
- Sample Point

Concho Operating, LLC. -
BKU Water Flood Satellite C
Eddy County, New Mexico
32.8364N, -104.0220W

American Safety Services, Inc
8715 Andrews Hwy
Odessa, TX 79765
Phone: (432) 552-7625

FIGURE 5

Excavation Depths

APPENDIX B

Table 1

TABLE 1
Summary of Delineation Sampling Analytical Results
Concentrations of Benzene, BTEX, TPH & Chloride in Soil
Concho Operating, LLC
Burch Keely Water Flood Satellite C
Eddy, New Mexico
NMOCD REF: 2RP-4052

SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	SOIL STATUS	8021B					8015M			300.0
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	Total TPH (mg/Kg)	CHLORIDE (mg/Kg)
NMOCD - Guidelines for Remediation of Leaks, Spills and Releases				10	NE	NE	NE	50	NE	NE	5,000	600
Vertical Delination Sampling												
T1	1'	1/9/2017	In-Situ	14.8	129	101	159	404	3,800	11,900	**15,700**	208.0
T1	2'	1/9/2017	In-Situ	<0.050	0.077	<0.050	<0.150	<0.300	<10.0	18.5	18.5	<16.0
T1	3'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.050	<0.300	<10.0	11.4	11.4	<16.0
T1	4'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	16.0
T1	5'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<16.0
T1	6'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<16.0
T1	7'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	<16.0
T1	8'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	<16.0
T1	10'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	16.0
T1	12'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	32.0
T2	1'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	**4,640**
T2	2'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	62.9	62.9	**5,040**
T2	3'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	**832**
T2	4'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	**1,100**
T2	5'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	**1,020**
T2	6'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	560
T2	7'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	512
T2	8'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	352
T2	10'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	288
T2	12'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	112
T3	1'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	**4,480**
T3	2'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	**6,320**
T3	3'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	**10,900**
T3	4'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	48.0
T3	5'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	64.0
T3	6'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.0
T3	7'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	48.0
T3	8'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	48.0
T3	10'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	112
T3	12'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	80.0

mg/Kg - milligrams per Kilogram

— = Not Established

Concentrations in **BOLD** exceed the NMOCD Guidelines

Proposed excavted area

TABLE 1
Summary of Delineation Sampling Analytical Results
Concentrations of Benzene, BTEX, TPH & Chloride in Soil
Concho Operating, LLC
Burch Keely Water Flood Satellite C
Eddy, New Mexico
NMOCD REF: 2RP-4052

SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	SOIL STATUS	8021B					8015M			300.0
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	Total TPH (mg/Kg)	CHLORIDE (mg/Kg)
NMOCD - Guidelines for Remediation of Leaks, Spills and Releases				10	NE	NE	NE	50	NE	NE	5,000	600
Vertical Delination Sampling												
T4	1'	1/9/2017	In-Situ	<0.200	4.48	4.92	8.07	17.5	105	391	496	**3,600**
T4	2'	1/9/2017	In-Situ	<0.050	0.069	0.227	0.559	0.855	<10.0	77.1	77.1	**1,040**
T4	3'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	**5,040**
T4	4'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	64.0
T4	5'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	16.0
T4	6'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	64.0
T4	7'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	32.0
T4	8'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	32.0
T5	1'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	256
T5	2'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	**1,010**
T5	3'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	**896**
T5	4'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	**960**
T5	5'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	512
T5	6'	1/9/2017	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	**1,550**
T5	7'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	**1,580**
T5	8'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	**1,340**
T5	10'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	**1,540**
T5	12'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	**1,470**
T5	14'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	**1,230**
T5	16'	1/9/2017	In-Situ	-	-	-	-	-	-	-	-	**1,010**
T5	17.5'	4/20/2017	In-Situ	-	-	-	-	-	-	-	-	**793**
T5	19'	4/20/2017	In-Situ	-	-	-	-	-	-	-	-	**1,390**
T5	22'	4/20/2017	In-Situ	-	-	-	-	-	-	-	-	**1,120**
T5	24'	4/20/2017	In-Situ	-	-	-	-	-	-	-	-	**3,380**
T5	25'	4/20/2017	In-Situ	-	-	-	-	-	-	-	-	**2,880**
T5	26.5'	4/20/2017	In-Situ	-	-	-	-	-	-	-	-	**1,150**
Soil Bore 1 @ T5	29'-30'	7/31/2017	In-Situ	-	-	-	-	-	-	-	-	**2,450.7**
Soil Bore 1 @ T5	39'-40'	7/31/2017	In-Situ	-	-	-	-	-	-	-	-	**716.49**
Soil Bore 1 @ T5	49'-50'	7/31/2017	In-Situ	-	-	-	-	-	-	-	-	511.79
Soil Bore 1 @ T5	59'-60'	7/31/2017	In-Situ	-	-	-	-	-	-	-	-	130.80
Soil Bore 1 @ T5	64'-65'	7/31/2017	In-Situ	-	-	-	-	-	-	-	-	254.54

mg/Kg - milligrams per Kilogram

— = Not Established

Concentrations in **BOLD** exceed the NMOCD Guidelines

Proposed excavted area

Propsed liner

APPENDIX C

Laboratory Analysis

Certificate of Analysis Summary 552080

COG Operating LLC, Artesia, NM

Project Name: BKU Satelite C Flowline

Project Id:
Contact: Aaron Lieb
Project Location: BKU Satelite C Flowline

Date Received in Lab: Fri Apr-28-17 11:00 am
Report Date: 04-MAY-17
Project Manager: Liz Givens

Analysis Requested													
	Lab Id:	552080-001		552080-002		552080-003		552080-004		552080-005		552080-006	
	Field Id:	T-5 - 17.5'		T-5 - 19'		T-5 - 22'		T-5 - 24'		T-5 - 25'		T-5 - 26.5'	
	Depth:	17.5 ft		19 ft		22 ft		24 ft		25 ft		2.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-20-17 10:30		Apr-20-17 10:30		Apr-20-17 10:30		Apr-20-17 10:30		Apr-20-17 10:30		Apr-20-17 10:30	
Inorganic Anions by EPA 300/300.1	***Extracted:***	May-04-17 09:00		May-04-17 09:00		May-04-17 09:00		May-04-17 09:00		May-04-17 09:00		May-04-17 09:00	
	Analyzed:	May-04-17 10:19		May-04-17 10:42		May-04-17 10:50		May-04-17 10:57		May-04-17 11:05		May-04-17 11:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		793	4.96	1390	24.5	1120	4.96	3380	25.0	2880	24.6	1150	4.97

Brandi Ritcherson
Project Manager

Analytical Report 552080

for

COG Operating LLC

Project Manager: Aaron Lieb

BKU Satelite C Flowline

04-MAY-17

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

04-MAY-17

Project Manager: **Aaron Lieb**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: XENCO Report No(s): **552080**
BKU Satelite C Flowline
Project Address: BKU Satelite C Flowline

Aaron Lieb:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 552080. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 552080 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brandi Ritcherson
Project Manager

Sample Cross Reference 552080

COG Operating LLC, Artesia, NM

BKU Satelite C Flowline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-5 - 17.5'	S	04-20-17 10:30	- 17.5 ft	552080-001
T-5 - 19'	S	04-20-17 10:30	- 19 ft	552080-002
T-5 - 22'	S	04-20-17 10:30	- 22 ft	552080-003
T-5 - 24'	S	04-20-17 10:30	- 24 ft	552080-004
T-5 - 25'	S	04-20-17 10:30	- 25 ft	552080-005
T-5 - 26.5'	S	04-20-17 10:30	- 2.5 ft	552080-006

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 552080

COG Operating LLC, Artesia, NM

BKU Satelite C Flowline

Sample Id:	**T-5 - 17.5'**	Matrix:	Soil	Date Received:	04.28.17 11.00
Lab Sample Id:	552080-001	Date Collected:	04.20.17 10.30	Sample Depth:	17.5 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.04.17 09.00	Basis:	Wet Weight
Seq Number:	3016516				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**793**	4.96	mg/kg	05.04.17 10.19		1

Certificate of Analytical Results 552080

COG Operating LLC, Artesia, NM

BKU Satelite C Flowline

Sample Id:	**T-5 - 19'**	Matrix:	Soil	Date Received:	04.28.17 11.00
Lab Sample Id:	552080-002	Date Collected:	04.20.17 10.30	Sample Depth:	19 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.04.17 09.00	Basis:	Wet Weight
Seq Number:	3016516				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1390**	24.5	mg/kg	05.04.17 10.42		5

Certificate of Analytical Results 552080

COG Operating LLC, Artesia, NM

BKU Satelite C Flowline

Sample Id:	**T-5 - 22'**	Matrix:	Soil	Date Received:	04.28.17 11.00
Lab Sample Id:	552080-003	Date Collected:	04.20.17 10.30	Sample Depth:	22 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.04.17 09.00	Basis:	Wet Weight
Seq Number:	3016516				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1120**	4.96	mg/kg	05.04.17 10.50		1

Certificate of Analytical Results 552080

COG Operating LLC, Artesia, NM

BKU Satelite C Flowline

Sample Id:	**T-5 - 24'**	Matrix:	Soil	Date Received:	04.28.17 11.00
Lab Sample Id:	552080-004	Date Collected:	04.20.17 10.30	Sample Depth:	24 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.04.17 09.00	Basis:	Wet Weight
Seq Number:	3016516				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3380**	25.0	mg/kg	05.04.17 10.57		5

Certificate of Analytical Results 552080

COG Operating LLC, Artesia, NM

BKU Satelite C Flowline

Sample Id:	**T-5 - 25'**	Matrix:	Soil	Date Received:	04.28.17 11.00
Lab Sample Id:	552080-005	Date Collected:	04.20.17 10.30	Sample Depth:	25 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.04.17 09.00	Basis:	Wet Weight
Seq Number:	3016516				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2880**	24.6	mg/kg	05.04.17 11.05		5

Certificate of Analytical Results 552080

COG Operating LLC, Artesia, NM

BKU Satelite C Flowline

Sample Id:	**T-5 - 26.5'**	Matrix:	Soil	Date Received:	04.28.17 11.00
Lab Sample Id:	552080-006	Date Collected:	04.20.17 10.30	Sample Depth:	2.5 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.04.17 09.00	Basis:	Wet Weight
Seq Number:	3016516				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1150**	4.97	mg/kg	05.04.17 11.28		1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 552080

COG Operating LLC

BKU Satelite C Flowline

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P

Seq Number: 3016516 Matrix: Solid Date Prep: 05.04.17

MB Sample Id: 724076-1-BLK LCS Sample Id: 724076-1-BKS LCSD Sample Id: 724076-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	232	93	234	94	90-110	1	20	mg/kg	05.04.17 10:04	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P

Seq Number: 3016516 Matrix: Soil Date Prep: 05.04.17

Parent Sample Id: 551955-002 MS Sample Id: 551955-002 S MSD Sample Id: 551955-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.04	250	260	100	263	102	90-110	1	20	mg/kg	05.04.17 12:13	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P

Seq Number: 3016516 Matrix: Soil Date Prep: 05.04.17

Parent Sample Id: 552080-001 MS Sample Id: 552080-001 S MSD Sample Id: 552080-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	793	248	1030	96	1020	92	90-110	1	20	mg/kg	05.04.17 10:27	

CHAIN OF CUSTODY

Page 1 Of 1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)

Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)

Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

www.xenco.com

Xenco Quote #

Xenco Job # 552080

Client / Reporting Information

Company Name / Branch: COG Operating LLC

Company Address: 2407 PECOS Avenue Artesia NM 88210

Email: alieb@concho.com dneel2@concho.com rhaskell@concho.com

Phone No: 575-748-1553

Project Contact: Aaron Lieb

Samplers's Name- Aaron Lieb

Project Information

Project Name/Number: BKU Satelite C Flowline

Project Location: BKU Satelite C Flov

Invoice To: COG Operating LLC
Attn: Robert Mcneill
600 W. Illinois
Midland TX 79701

PO Number:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chloride	Field Comments
1	TS - 17.5'	17.5	4/20/17	10:30AM	S	1									X	
2	TS - 19'	19	4/20/17	10:30am		1									X	
3	TS - 22'	22				1									X	
4	TS - 24'	24				1									X	
5	TS - 25'	25				1									X	
6	TS - 26.5'	26.5				1									X	
7																
8																
9																
10																

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

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

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

*Need to Run ASAP

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	[signature]	4-28-17 1700	S. Butler 11:00 AM 4-28-17	2 ARCESIO	13:00 4-29-17	2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice ✓ Cooler Temp. 5°C Thermo. Corr. Factor

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

Final 1.000

Page 14 of 15

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 04/28/2017 11:00:00 AM

Work Order #: 552080

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

Temperature Measuring device used : R9

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**Yes**
#5 *Custody Seals intact on shipping container/ cooler?	**Yes**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**No**
#21 VOC samples have zero headspace?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer
Date: 05/01/2017

Checklist reviewed by: Brandi Ritcherson
Brandi Ritcherson
Date: 05/01/2017

Certificate of Analysis Summary 558911

American Safety Services, Odessa, TX

Project Name: Burch Keely Water Flood Satelite C

Project Id:

Contact: Thomas Franklin

Project Location: Eddy Co.,NM

Date Received in Lab: Tue Aug-01-17 08:10 am

Report Date: 03-AUG-17

Project Manager: Brandi Ritcherson

Analysis Requested										
	Lab Id:	558911-001		558911-002		558911-003		558911-004		558911-005	
	Field Id:	Soil Bore-1 @ T5		Soil Bore-1 @ T5		Soil Bore-1 @ T5		Soil Bore-1 @ T5		Soil Bore-1 @ T5	
	Depth:	29-30 ft		39-40 ft		49-50 ft		59-60 ft		64-65 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-31-17 14:00		Jul-31-17 14:05		Jul-31-17 14:10		Jul-31-17 14:15		Jul-31-17 14:40	
Chloride by EPA 300	***Extracted:***	Aug-02-17 09:15		Aug-02-17 09:15		Aug-02-17 09:15		Aug-02-17 09:15		Aug-02-17 09:15	
	Analyzed:	Aug-02-17 10:23		Aug-02-17 10:00		Aug-02-17 10:31		Aug-02-17 10:39		Aug-02-17 10:46	
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL	mg/L	RL
Chloride		2450.7	24.558	716.49	4.9310	511.79	4.9505	130.80	4.9900	254.54	4.9801

Brandi Ritcherson
Project Manager

Analytical Report 558911

for

American Safety Services

Project Manager: Thomas Franklin

Burch Keely Water Flood Satelite C

03-AUG-17

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

03-AUG-17

Project Manager: **Thomas Franklin**
American Safety Services
8715 Andrews Hwy
Odessa, TX 79765

Reference: XENCO Report No(s): **558911**
Burch Keely Water Flood Satelite C
Project Address: Eddy Co.,NM

Thomas Franklin:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 558911. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 558911 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brandi Ritcherson
Project Manager

Sample Cross Reference 558911

American Safety Services, Odessa, TX

Burch Keely Water Flood Satelite C

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Soil Bore-1 @ T5	S	07-31-17 14:00	29 - 30 ft	558911-001
Soil Bore-1 @ T5	S	07-31-17 14:05	39 - 40 ft	558911-002
Soil Bore-1 @ T5	S	07-31-17 14:10	49 - 50 ft	558911-003
Soil Bore-1 @ T5	S	07-31-17 14:15	59 - 60 ft	558911-004
Soil Bore-1 @ T5	S	07-31-17 14:40	64 - 65 ft	558911-005

Client Name: American Safety Services

Project Name: Burch Keely Water Flood Satelite C

Project ID:
Work Order Number(s): *558911*

Report Date: *03-AUG-17*
Date Received: *08/01/2017*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3023912 Chloride by EPA 300

Lab Sample ID 558912-008 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 558911-001, -002, -003, -004, -005.

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

Certificate of Analytical Results 558911

American Safety Services, Odessa, TX

Burch Keely Water Flood Satelite C

Sample Id:	**Soil Bore-1 @ T5**	Matrix:	Soil	Date Received:	08.01.17 08.10
Lab Sample Id:	558911-001	Date Collected:	07.31.17 14.00	Sample Depth:	29 - 30 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RHE			% Moisture:	
Analyst:	MGO	Date Prep:	08.02.17 09.15	Basis:	Wet Weight
Seq Number:	3023912				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2450.7**	24.558	mg/L	08.02.17 10.23		5

Certificate of Analytical Results 558911

American Safety Services, Odessa, TX

Burch Keely Water Flood Satelite C

Sample Id:	**Soil Bore-1 @ T5**	Matrix:	Soil	Date Received:	08.01.17 08.10
Lab Sample Id:	558911-002	Date Collected:	07.31.17 14.05	Sample Depth:	39 - 40 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RHE			% Moisture:	
Analyst:	MGO	Date Prep:	08.02.17 09.15	Basis:	Wet Weight
Seq Number:	3023912				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**716.49**	4.9310	mg/L	08.02.17 10.00		1

Certificate of Analytical Results 558911

American Safety Services, Odessa, TX

Burch Keely Water Flood Satelite C

Sample Id:	**Soil Bore-1 @ T5**	Matrix:	Soil	Date Received:	08.01.17 08.10
Lab Sample Id:	558911-003	Date Collected:	07.31.17 14.10	Sample Depth:	49 - 50 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RHE			% Moisture:	
Analyst:	MGO	Date Prep:	08.02.17 09.15	Basis:	Wet Weight
Seq Number:	3023912				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**511.79**	4.9505	mg/L	08.02.17 10.31		1

Certificate of Analytical Results 558911

American Safety Services, Odessa, TX

Burch Keely Water Flood Satelite C

Sample Id:	**Soil Bore-1 @ T5**	Matrix:	Soil	Date Received:	08.01.17 08.10
Lab Sample Id:	558911-004	Date Collected:	07.31.17 14.15	Sample Depth:	59 - 60 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RHE			% Moisture:	
Analyst:	MGO	Date Prep:	08.02.17 09.15	Basis:	Wet Weight
Seq Number:	3023912				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**130.80**	4.9900	mg/L	08.02.17 10.39		1

Certificate of Analytical Results 558911

American Safety Services, Odessa, TX

Burch Keely Water Flood Satelite C

Sample Id:	**Soil Bore-1 @ T5**	Matrix:	Soil	Date Received:	08.01.17 08.10
Lab Sample Id:	558911-005	Date Collected:	07.31.17 14.40	Sample Depth:	64 - 65 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RHE			% Moisture:	
Analyst:	MGO	Date Prep:	08.02.17 09.15	Basis:	Wet Weight
Seq Number:	3023912				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**254.54**	4.9801	mg/L	08.02.17 10.46		1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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

QC Summary 558911

American Safety Services

Burch Keely Water Flood Satelite C

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3023912 Matrix: Solid Date Prep: 08.02.17

MB Sample Id: 728598-1-BLK LCS Sample Id: 728598-1-BKS LCSD Sample Id: 728598-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.0000	250.00	262.15	105	261.22	104	90-110	0	20	mg/L	08.02.17 09:45	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3023912 Matrix: Soil Date Prep: 08.02.17

Parent Sample Id: 558911-002 MS Sample Id: 558911-002 S MSD Sample Id: 558911-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	716.49	246.55	936.87	89	935.65	89	90-110	0	20	mg/L	08.02.17 10:08	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3023912 Matrix: Soil Date Prep: 08.02.17

Parent Sample Id: 558912-008 MS Sample Id: 558912-008 S MSD Sample Id: 558912-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1021.3	248.51	1222.3	81	1223.3	81	90-110	0	20	mg/L	08.02.17 11:55	X

CHAIN OF CUSTODY

Page 1 Of 1

XENCO LABORATORIES
Setting the Standard since 1990

Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote #
Xenco Job # 558911

Client / Reporting Information

Company Name / Branch: American Safety Services Inc.
Company Address: 8715 Andrews Hwy Odessa Tx 79765
Email: tfranklin@americansafety.net; jzimmerman@americansafety.net
Phone No: 432-557-9868
Project Contact: Thomas Franklin
Samplers's Name RR/MD

Project Information

Project Name/Number: Burch Keely Water Flood Satellite C
Project Location: Eddy Co NM
Invoice To: COG - Attn Becky Haskell
PO Number:

Analytical Information

Chloride (Method 300.)

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chloride	Field Comments
1	Soil Bore -1 @ TS	29-30	7/31/17	1400	S	1									+	On Ice
2		39-40		1405											+	
3		49-50		1410											+	
4		59-60		1415											+	
5		64-65		1440											+	
6																
7																
8	NFE															
9																
10																

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [x] Contract TAT
- [ ] 3 Day EMERGENCY

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

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:
Email Results only to:
rreich@americansafety.net
tfranklin@americansafety.net

FED-EX / UPS: Tracking #

Temp: 3.5 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.3

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		8/1/17 0810		2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp. Thermo. Corr. Factor

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: American Safety Services

Date/ Time Received: 08/01/2017 08:10:00 AM

Work Order #: 558911

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**No**
#21 VOC samples have zero headspace?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Shawnee Smith Date: 08/01/2017

Shawnee Smith

Checklist reviewed by: Brandi Ritcherson Date: 08/01/2017

Brandi Ritcherson

APPENDIX D

Initial C-141

NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 28 2016
RECEIVED

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

DAB1700438955

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: COG Operating LLC 229137		Contact: Robert McNeill	
Address: 600 West Illinois Avenue, Midland TX 79701		Telephone No. 432-683-7443	
Facility Name: Burch Keely Water Flood Satellite C		Facility Type: Flowline	
Surface Owner: Federal	Mineral Owner:		API No. 30-015-02971

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	13	17S	29E	1980	North	735	East	Eddy

Latitude 32.8364334 **Longitude** 104.0220566

NATURE OF RELEASE

Type of Release: Oil and Produced Water	Volume of Release: 15bbls Oil & 25bbls PW	Volume Recovered: 10bbls Oil & 20bbls PW
Source of Release: Flowline	Date and Hour of Occurrence: December 22, 2016 7:00 am	Date and Hour of Discovery: December 22, 2016 7:00 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mr. Bratcher – NMOCD / Ms. Tucker - BLM	
By Whom? Dakota Neel	Date and Hour: December 22, 2016 3:08 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The release was caused by a flowline leak on a buried flowline. The old flowline was abandoned and installed a new line.

Describe Area Affected and Cleanup Action Taken.*

The release was within a pasture. A vacuum truck was dispatched to remove all freestanding fluids. Concho will have the spill area sampled to delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Rebecca Haskell	OIL CONSERVATION DIVISION	
Printed Name: Rebecca Haskell	Approved by Environmental Specialist: Crystal Weaver	
Title: Senior HSE Coordinator	Approval Date: 1/4/17	Expiration Date: N/A
E-mail Address: rhaskell@concho.com	Conditions of Approval: see attached	Attached ☒
Date: 12/28/2016 Phone: 432-683-7443		

* Attach Additional Sheets If Necessary

2RP-4052