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DELINEATION WORKPLAN

COG – WEST BRUSHY 8 FEDERAL SWD #1 (Leak Date: 1/24/17)

RP # 2RP-4094

This delineation workplan and remediation proposal addresses the release associated with RP # 2 RP-4094.

The following information includes:

1. Scaled digital site map with spill area demarcated and leak point identified along with sample point locations and areas of remediation at appropriate depths.
2. GPS information for sample points and sample methodology
3. Depth to groundwater information (i.e., pdf of OSE search results and/or copy of Chevron groundwater trend map).
4. Laboratory analysis results summary table and original laboratory analysis reports
5. A copy of the initial C-141
6. Potentially other pertinent information as necessary for site specific purposes.

Based on the information included in this package and the NMOCD guidelines, the following remediation is proposed:

COG will excavate the spill area as depicted on the following site diagram. The leak area covering SP1 and SP2 (pink shade on diagram) will be excavated to a depth of 3 feet. The area covering SP3 and SP4 (yellow shade on diagram) will be excavated to a depth of 2 feet.

The entire site will then be backfilled with clean soil and revegetated (if warranted) to the standards of the appropriate regulatory agency or private surface owner.

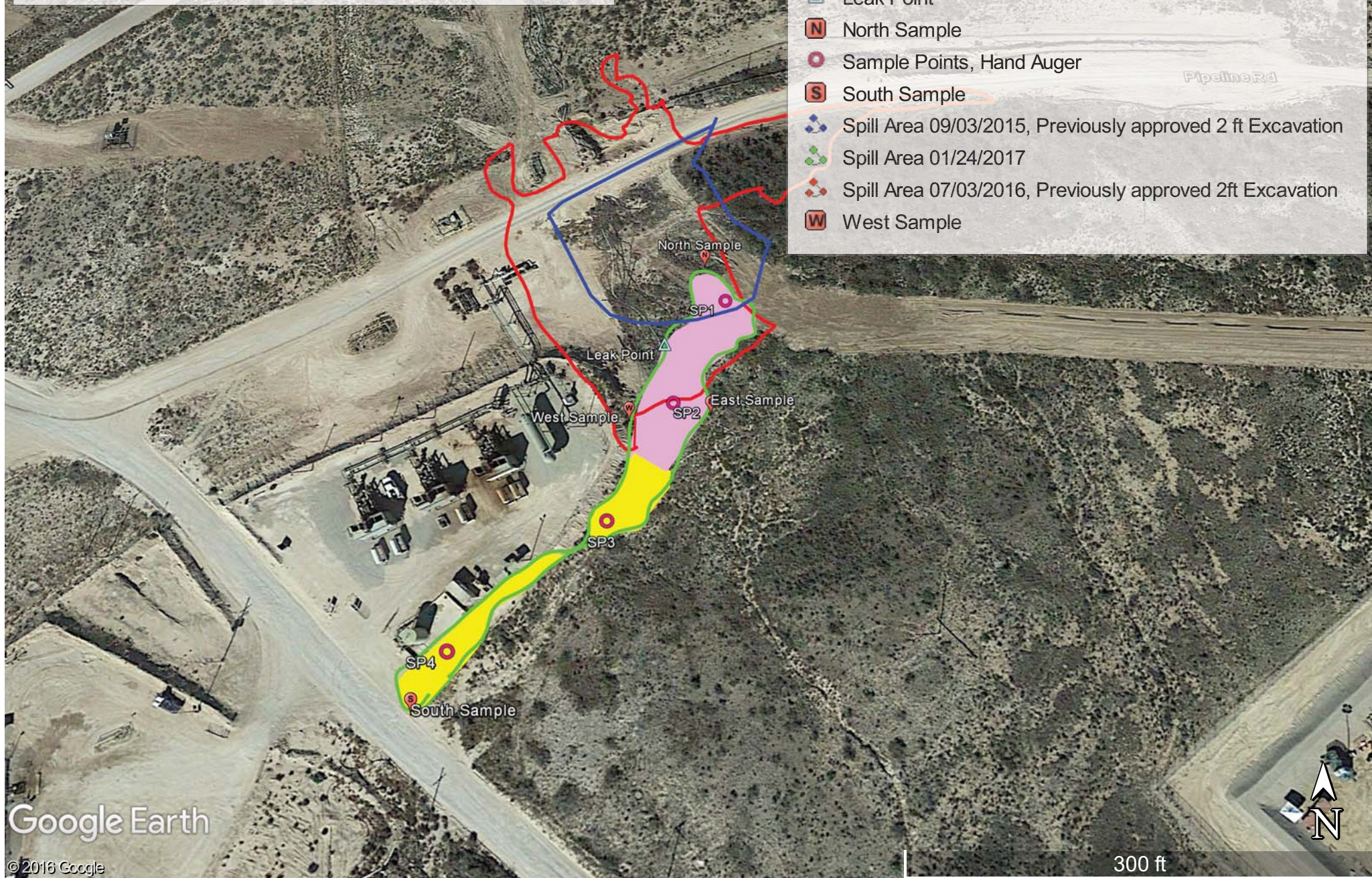
All excavated materials will be disposed of at an NMOCD-approved disposal facility.

COG, West Brushy 8 Federal SWD #1

Leak Date: 01/24/2017
Eddy County, NM
API# 30-015-31675
RP# 2RP-4094

Legend

- 2 ft Excavation
- 3 ft Excavation
- East Sample
- Leak Point
- North Sample
- Sample Points, Hand Auger
- South Sample
- Spill Area 09/03/2015, Previously approved 2 ft Excavation
- Spill Area 01/24/2017
- Spill Area 07/03/2016, Previously approved 2ft Excavation
- West Sample



Google Earth

© 2016 Google

COG, West Brushy 8 Federal SWD #1 (Leak Date: 01/24/2017)

Samples, Hand Auger

SP1, GPS POINT: N 32.06353 W-103.99737

SP2, GPS POINT: N 32.06326 W-103.99750

SP3, GPS POINT: N 32.06298 W-103.99765

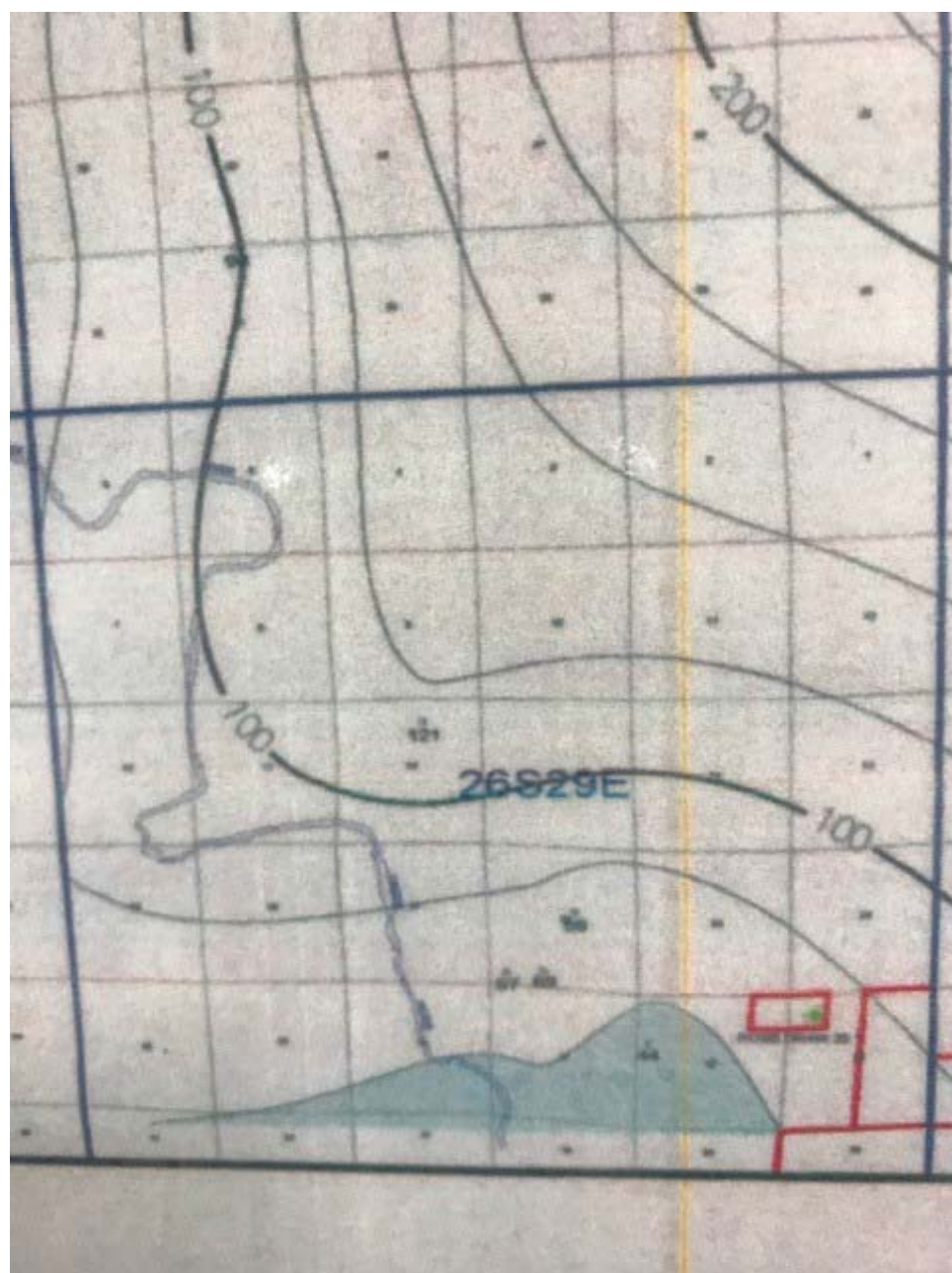
SP4, GPS POINT: N 32.06269 W-103.99800

NORTH SAMPLE, GPS POINT: N 32.06363 W-103.99742

SOUTH SAMPLE, GPS POINT: N 32.06258 W-103.99806

EAST SAMPLE, GPS POINT: N 32.06324 W-103.99741

WEST SAMPLE, GPS POINT: N 32.06323 W-103.99761





New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
C_03507_POD1		C	ED	1	3	3	05	26S	29E	593064	3548313	<input type="text"/>	1445	140	78 62
C_03508_POD1		C	ED	1	3	3	05	26S	29E	593063	3548361	<input type="text"/>	1464	140	75 65

Average Depth to Water: **76 feet**

Minimum Depth: **75 feet**

Maximum Depth: **78 feet**

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 594416

Northing (Y): 3547801

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.

3/22/17 11:11 AM

WATER COLUMN/ AVERAGE DEPTH TO
WATER

Public Land Survey System (PLSS)

☐

Q64:

Q16:

NE

Q4:

NE

Sec:

08

Tws:

26S

Rng:

29E

State Plane Coordinate System - NAD27

☐

X:

0

ft

Y:

0

ft

Zone:

State Plane Coordinate System - NAD83

☐

X:

0

ft

Y:

0

ft

Zone:

Degrees/Minutes/Seconds

☐

Longitude (X):

Degrees:

0

°

Minutes:

0

'

Seconds:

0

"

Latitude (Y):

Degrees:

0

°

Minutes:

0

'

Seconds:

0

"

UTM - NAD27

☐

Easting (X):

0

mtrs

Northing (Y):

0

mtrs

Zone:

SUBMIT

All Conversion Results are displayed as NAD 1983 UTM Zone 13

Easting (X):

594416.0

mtrs

Northing (Y):

3547801.0

mtrs

~~ Please keep screen open to copy UTM values for Reports. ~~



Groundwater Plot

COG West Brushy 8 Federal SWD #1

County
Eddy

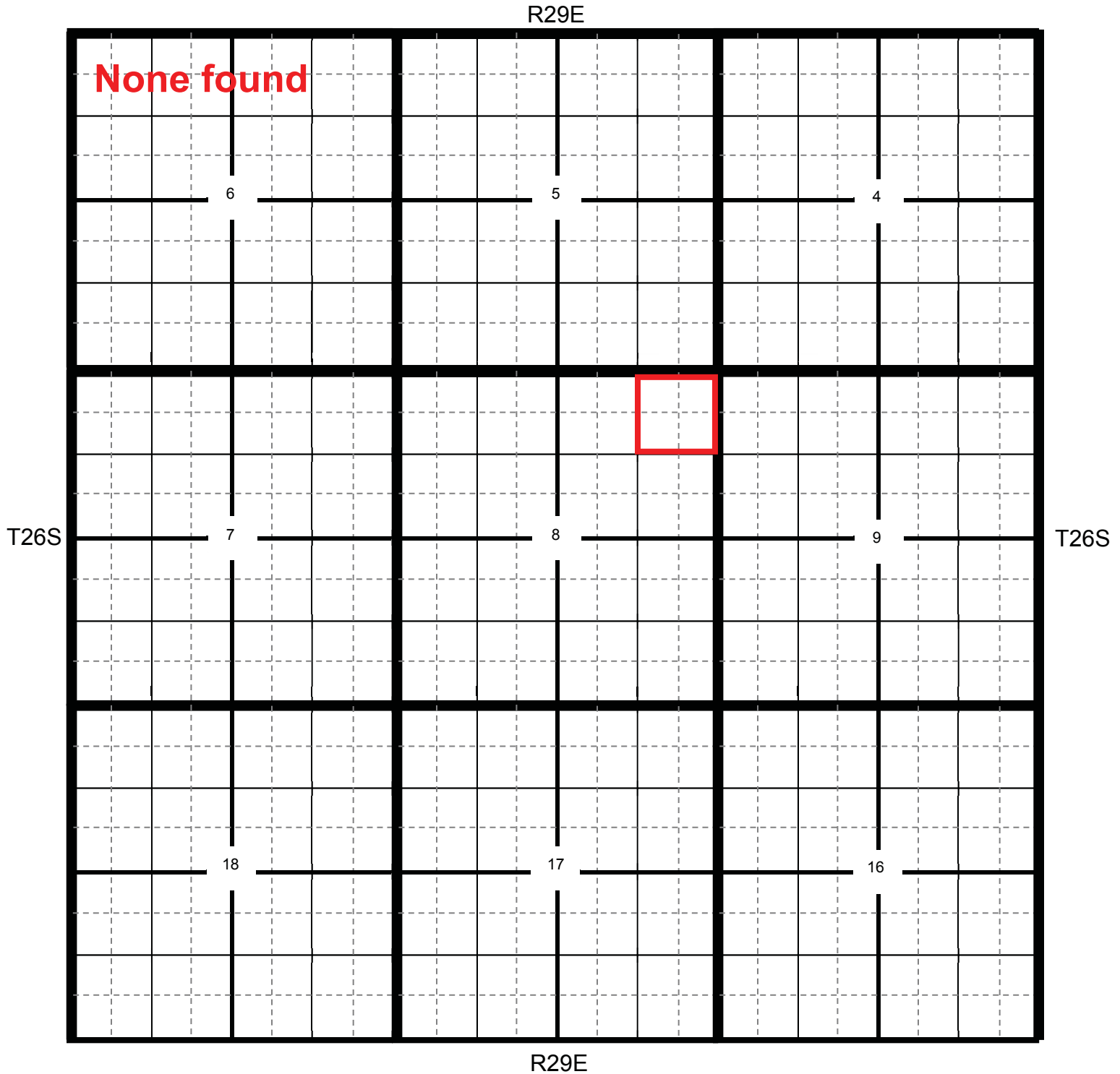
Unit Letter
A

Section
8

Township
26S

Range
29E

Trend Map 75'-100'



★ Location

● OCD

● USGS

● SEO

● All Databases

COG West Brushy 8 Federal SWD #1

County Eddy **Unit Letter** A **Section** 8 **Township** 26S **Range** 29E

Trend Map 75'-100'

1

2

NW/NW None Found	NE/NW	NW/NE	NE/NE
Unit Letter D	Unit Letter C	Unit Letter B	Unit Letter A
SW/NW	SE/NW	SW/NE	SE/NE
Unit Letter E	Unit Letter F	Unit Letter G	Unit Letter H
NW/SW	NE/SW	NW/SE	NE/SE
Unit Letter L	Unit Letter K	Unit Letter J	Unit Letter I
SW/SW	SE/SW	SW/SE	SE/SE
Unit Letter M	Unit Letter N	Unit Letter O	Unit Letter P

3

4

**Laboratory Analytical Results Summary
West Brushy 8 Federal SWD #1**

		Sample	SP1 @ 1'	SP1 @ 3'	SP1 @ 4'	SP1 @ 5'
Analyte	Method	Date	2/7/17	2/7/17	2/7/17	2/7/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	n/a	n/a	n/a
Chloride	SM4500Cl-B		10800	5200	848	48
GRO	TPH 8015M		<10.0	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	n/a	n/a	n/a

		Sample	SP2 @ 1'	SP2 @ 3'	SP2 @ 4'	SP2 @ 5'
Analyte	Method	Date	2/7/17	2/7/17	2/7/17	2/7/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	n/a	n/a	n/a
Chloride	SM4500Cl-B		9000	5360	656	64
GRO	TPH 8015M		<10.0	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	n/a	n/a	n/a

		Sample	SP3 @ 1'	SP3 @ 2'	SP3 @ 3'	SP3 @ 4'
Analyte	Method	Date	2/7/17	2/7/17	2/7/17	2/7/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	n/a	n/a	n/a
Chloride	SM4500Cl-B		11700	4960	400	80
GRO	TPH 8015M		<10.0	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	n/a	n/a	n/a

		Sample	SP4 @ 1'	SP4 @ 2'	SP4 @ 3'	SP4 @ 4'
Analyte	Method	Date	2/7/17	2/7/17	2/7/17	2/7/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	n/a	n/a	n/a
Chloride	SM4500Cl-B		8660	4480	416	48
GRO	TPH 8015M		<10.0	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	n/a	n/a	n/a

		Sample	NORTH @ SURFACE
Analyte	Method	Date	2/7/17
			mg/Kg
Chloride	SM4500Cl-B		48

		Sample	EAST @ SURFACE
Analyte	Method	Date	2/7/17
			mg/Kg
Chloride	SM4500Cl-B		64

		Sample	WEST @ SURFACE
Analyte	Method	Date	2/7/17
			mg/Kg
Chloride	SM4500Cl-B		48

		Sample	SOUTH @ SURFACE
Analyte	Method	Date	2/7/17
			mg/Kg
Chloride	SM4500Cl-B		48

February 17, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: W BRUSHY FED #1

Enclosed are the results of analyses for samples received by the laboratory on 02/10/17 11:55.

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/qa/lab_accred_certif.html.

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

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received:	02/10/2017	Sampling Date:	02/07/2017
Reported:	02/17/2017	Sampling Type:	Soil
Project Name:	W BRUSHY FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP1 @ 1 (H700349-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/15/2017	ND	1.89	94.3	2.00	1.60	
Toluene*	<0.050	0.050	02/15/2017	ND	1.77	88.6	2.00	1.12	
Ethylbenzene*	<0.050	0.050	02/15/2017	ND	1.78	89.1	2.00	1.15	
Total Xylenes*	<0.150	0.150	02/15/2017	ND	5.10	85.1	6.00	1.34	
Total BTEX	<0.300	0.300	02/15/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10800	16.0	02/15/2017	ND	416	104	400	0.00		

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	02/13/2017	ND	190	94.9	200	0.527	
DRO >C10-C28	<10.0	10.0	02/13/2017	ND	207	104	200	1.24	

Surrogate: 1-Chlorooctane 82.9 % 35-147

Surrogate: 1-Chlorooctadecane 90.3 % 28-171

Sample ID: SP1 @ 3 (H700349-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5200	16.0	02/15/2017	ND	416	104	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received: 02/10/2017
Reported: 02/17/2017
Project Name: W BRUSHY FED #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP1 @ 4 (H700349-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	848	16.0	02/15/2017	ND	416	104	400	0.00	

Sample ID: SP1 @ 5 (H700349-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/15/2017	ND	416	104	400	0.00	

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Hobbs NM, 88241
Fax To: (575) 397-0397

Received: 02/10/2017
Reported: 02/17/2017
Project Name: W BRUSHY FED #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP2 @ 1 (H700349-05)

BTX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/15/2017	ND	1.89	94.3	2.00	1.60		
Toluene*	<0.050	0.050	02/15/2017	ND	1.77	88.6	2.00	1.12		
Ethylbenzene*	<0.050	0.050	02/15/2017	ND	1.78	89.1	2.00	1.15		
Total Xylenes*	<0.150	0.150	02/15/2017	ND	5.10	85.1	6.00	1.34		
Total BTX	<0.300	0.300	02/15/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9000	16.0	02/15/2017	ND	416	104	400	0.00	

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	02/13/2017	ND	190	94.9	200	0.527	
DRO >C10-C28	<10.0	10.0	02/13/2017	ND	207	104	200	1.24	

Surrogate: 1-Chlorooctane 80.5 % 35-147

Surrogate: 1-Chlorooctadecane 89.1 % 28-171

Sample ID: SP2 @ 3 (H700349-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5360	16.0	02/15/2017	ND	416	104	400	0.00	

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received: 02/10/2017
Reported: 02/17/2017
Project Name: W BRUSHY FED #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP2 @ 4 (H700349-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	656	16.0	02/15/2017	ND	416	104	400	0.00		

Sample ID: SP2 @ 5 (H700349-08)

Chloride, SM4500Cl-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	02/15/2017	ND	416	104	400	0.00	

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Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received: 02/10/2017
Reported: 02/17/2017
Project Name: W BRUSHY FED #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP3 @ 1 (H700349-09)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/15/2017	ND	1.89	94.3	2.00	1.60		
Toluene*	<0.050	0.050	02/15/2017	ND	1.77	88.6	2.00	1.12		
Ethylbenzene*	<0.050	0.050	02/15/2017	ND	1.78	89.1	2.00	1.15		
Total Xylenes*	<0.150	0.150	02/15/2017	ND	5.10	85.1	6.00	1.34		
Total BTEx	<0.300	0.300	02/15/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11700	16.0	02/15/2017	ND	416	104	400	0.00	

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	02/13/2017	ND	190	94.9	200	0.527	
DRO >C10-C28	<10.0	10.0	02/13/2017	ND	207	104	200	1.24	

Surrogate: 1-Chlorooctane 88.3 % 35-147

Surrogate: 1-Chlorooctadecane 89.2 % 28-171

Sample ID: SP3 @ 2 (H700349-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4960	16.0	02/15/2017	ND	416	104	400	0.00	

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Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received: 02/10/2017
Reported: 02/17/2017
Project Name: W BRUSHY FED #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP3 @ 3 (H700349-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	02/15/2017	ND	416	104	400	0.00	

Sample ID: SP3 @ 4 (H700349-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	02/15/2017	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received: 02/10/2017
Reported: 02/17/2017
Project Name: W BRUSHY FED #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP4 @ 1 (H700349-13)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/15/2017	ND	1.89	94.3	2.00	1.60		
Toluene*	<0.050	0.050	02/15/2017	ND	1.77	88.6	2.00	1.12		
Ethylbenzene*	<0.050	0.050	02/15/2017	ND	1.78	89.1	2.00	1.15		
Total Xylenes*	<0.150	0.150	02/15/2017	ND	5.10	85.1	6.00	1.34		
Total BTEX	<0.300	0.300	02/15/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8660	16.0	02/15/2017	ND	416	104	400	0.00	

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	02/13/2017	ND	190	94.9	200	0.527	
DRO >C10-C28	<10.0	10.0	02/13/2017	ND	207	104	200	1.24	

Surrogate: 1-Chlorooctane 78.4 % 35-147

Surrogate: 1-Chlorooctadecane 86.1 % 28-171

Sample ID: SP4 @ 2 (H700349-14)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4480	16.0	02/15/2017	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	02/10/2017	Sampling Date:	02/07/2017
Reported:	02/17/2017	Sampling Type:	Soil
Project Name:	W BRUSHY FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP4 @ 3 (H700349-15)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	416	16.0	02/15/2017	ND	416	104	400	0.00		

Sample ID: SP4 @ 4 (H700349-16)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/15/2017	ND	416	104	400	0.00	

Sample ID: NORTH @ SURFACE (H700349-17)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	02/15/2017	ND	416	104	400	0.00		

Sample ID: EAST @ SURFACE (H700349-18)

Chloride, 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	02/15/2017	ND	416	104	400	0.00	

Sample ID: WEST @ SURFACE (H700349-19)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/15/2017	ND	432	108	400	3.64	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

BBC International, Inc.
Cliff Brunson
P.O. Box 805
Hobbs NM, 88241
Fax To: (575) 397-0397

Received: 02/10/2017
Reported: 02/17/2017
Project Name: W BRUSHY FED #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 02/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SOUTH @ SURFACE (H700349-20)**Chloride, SM4500Cl-B****mg/kg****Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/15/2017	ND	432	108	400	3.64	

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Celey D. Keene, Lab Director/Quality Manager

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

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Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: BBC International, Inc.		BILL TO		ANALYSIS REQUEST																		
Project Manager: Cliff Brunson		P.O. #:																				
Address: P.O. Box 805		Company: COG																				
City: Hobbs		Attn:																				
Phone #: 575-397-6388		Address:																				
Fax #: 575-397-0397		City:																				
Project #:		State:																				
Project Name: W. Brushy Fed #1		Zip:																				
Project Location:		Phone #:																				
Fax #:																						
Sampler Name: Jeff Ornelas																						
FOR LAB USE ONLY																						
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV	SAMPLING												
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :										
ATD00349	SP3 @ 3	G 1	1										DATE	TIME	CL	BTEX	TPH					
11	SP3 @ 4	G 1	1										2:17	150								
12	SP4 @ 1	G 1	1										2:15	150								
13	SP4 @ 2	G 1	1										2:36	150								
14	SP4 @ 3	G 1	1										2:38	150								
15	SP4 @ 4	G 1	1										2:42	150								
16	SP4 @ 5	G 1	1										2:45	150								
17	North @ Surface	G 1	1										2:46	150								
18	East @ Surface	G 1	1										2:48	150								
19	West @ Surface	G 1	1										2:50	150								
20	South @ Surface	G 1	1										2:55	150								
Relinquished By: Jeff Ornelas		Date: 2:07:17	Time: 3:00PM	Received By: Kelly Brunson																		
Relinquished By: Kelly Brunson		Date: 2:10:17	Time: 12:55	Received By: Jarama Elabare																		
Delivered By: (Circle One)		Sample Condition		CHECKED BY: (Initials)																		
Sampler - UPS - Bus - Other: #75 3.6e		<input checked="" type="checkbox"/> Cool <input checked="" type="checkbox"/> Intact		<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No																		
Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:		Add'l Fax #:																		
REMARKS:																						

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

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

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company:	COG Operating LLC	Contact:	Robert McNeill
Address:	600 West Illinois Avenue, Midland TX 79701	Telephone No.	432-683-7443
Facility Name:	West Brushy 8 Federal SWD #001	Facility Type:	SWD

Surface Owner:	Federal	Mineral Owner:		API No.	30-015-31675
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	08	26S	29E	660	North	330	East	Eddy

Latitude Longitude

NATURE OF RELEASE

Type of Release:	Produced Water	Volume of Release:	30 bbls	Volume Recovered:	15 bbls
Source of Release:	Flowline	Date and Hour of Occurrence:	January 24, 2017 10:30 am	Date and Hour of Discovery:	January 24, 2017 10:30 am
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Ms. Weaver - NMOCD / Shelly Tucker - BLM		
By Whom?	Rebecca Haskell	Date and Hour:	January 24, 2017 3:05 pm		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 due to a connection failure in a polyline. The connection was replaced.

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: <i>Rebecca Haskell</i>	OIL CONSERVATION DIVISION		
Printed Name: Rebecca Haskell	Approved by Environmental Specialist:		
Title: Senior HSE Coordinator	Approval Date:	Expiration Date:	
E-mail Address: rhaskell@concho.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: January 25, 2017 Phone: 432-683-7443			

* Attach Additional Sheets If Necessary