

Remediation Summary & Closure Request

Property: Concho Operating, LLC. COI Empire South Unit #015 Eddy County, New Mexico Unit Letter "E", Section 08, Township 18 South, Range 29 East Latitude 32.7637024, Longitude -104.103363 2RP-3894

September 2017

Prepared for:

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

Prepared by:

Ina Reint

Ryan Reich Environmental Project Manager

K Filli

Thomas Franklin Environmental Manager

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Remediation Summary & Closure Request

Concho Operating, LLC. COI Empire South Unit #015 Lea County, New Mexico Unit Letter "E", Section 08, Township 18 South, Range 29 East Latitude 32.7637024, Longitude -104.103363 2RP-3894

September 2017

1.0 INTRODUCTION

1.1 Site Description & Background

American Safety Services Inc. (ASSI) has prepared this Closure Request for the Concho Operating, LLC. (COG) COI Empire South Unit #015. This Closure request is based upon the interpretation of the data collected by ASSI.

The COI Empire South Unit #015 (referred to hereinafter as the "Site" or "subject Site") is located in Unit Letter "E", Section 8, Township 18 South, Range 29 East, Eddy County, New Mexico (GPS 32.7637024N, -104.103363W).

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 Closure Request is to present documentation of the activities that were performed to date and to request an effective means to close 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:

Rankin	g Criteria		Ranking Score
	<50 feet	20	
Depth to Groundwater	50 to 99 feet	10	0
	>100 feet 0		
Wellhead Protection Area, <a>	Yes	20	
source, or; <200 feet from private domestic water source.	No	0	0
Distance to Surface Water	<200 feet	20	
	200 to 1,000 feet	10	0
Body	>1,000 feet	0	
Total Rar	nking 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 greater than 150 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 the Site in Lea County, New Mexico and surrounding topography.

2.1 Groundwater Research

According to research conducted on the New Mexico Office of the State Engineer (NMOSE) groundwater database, no registered water wells were located in section 08. According to ChevronTexaco Groundwater Trend Map, groundwater is between one hundred twenty-five (125) and one hundred fifty (150) feet in the approximate location of the Site.

3.0 INITIAL RESPONSE & ACTIVITIES

3.1 Initial Response

On September 21, 2017, ASSI personnel responded to a reportable release that occurred on August 30, 2016. Ninety (90) barrels (bbls) of oil was released directly to the ground caused when lightning struck the Site. None of the fluids were recovered. The release impacted approximately thirty-three thousand seven hundred-fifty (33,750) square feet of production pad and adjacent pasture area (Figure 3).

3.2 Sampling Activities

Sampling activities were conducted on September 21, 2016 by ASSI using a stainless steel hand auger. Mr. Ryan Reich, an ASSI environmental professional, was present to document onsite activities (written and photographic). Fourteen (14) auger holes were installed, using a stainless steel hand auger, each to various depths ranging from surface (0') to three and one-half (3.5) foot below ground surface (bgs) (Table 1) and shown on Figure 4. Discrete samples were collected from all auger hole locations at the following intervals 0'-1',1'-1.5',2'-2.5', and 3'-3.5' bgs. Soil was field screened for Chloride utilizing electro conductivity during sampling activities.

3.3 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 all Chloride levels are below the NMOCD clean-up goals as discussed in Section 2.0 at all sample locations. However, at location AH-5 vertical delineation was achieved at a depth of four (4) feet bgs with a Chloride concentration of 90.6 mg/Kg. Delineation efforts were achieved during the implementation of the approved remediation work plan. Each location meets the NMOCD's threshold of 600 mg/Kg satisfying clean-up goal criteria.

3.4 Excavation Activities

Excavation remediation activities were conducted by ASSI and began in the area previously identified. Mr. Ryan Reich, an ASSI environmental professional, was present to observe on-Site activities. Remediation efforts began on August 21, 2017 and were completed on August 24th and included the removal of impacted material from the Site and transporting it off-Site to an appropriate disposal facility. The final dimensions of the excavation were thirty-five (35) feet in length, forty-five (45) feet in width and three and one-half (3.5) feet in depth near the center as shown in Figure 4 (Appendix A). Approximately two hundred and twenty (220) cubic yards (yd³) of impacted soil was transported to R-360 Environmental Solutions for proper disposal, the manifests are shown in Appendix E.

3.4.1 Excavation Confirmation Soil Sampling Program

Delineation sampling around the excavated area of AH-5 was conducted on August 21, 2017. A total of seven (7) samples were collected, one (1) sample from each excavated sidewall in its perspective cardinal direction (North, South, East and West) and three (3) samples from Trench 1 (i.e., T-1[AH5] [3.5'EB]) ranging in various depths from the surface of the excavated bottom to one and one-half (1.5) feet below the excavated bottom.

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 September 21st sampling event and to Xenco Laboratories in Midland, Texas for the August 21st sampling event.

Figure 4 shows the approximate location of the sampling (i.e., Auger Hole, Sidewall and Trench) locations and dimensions of the previously excavated area in relation to pertinent land features and general Site boundaries, which is included in Appendix A.

5.0 REMEDIATION SUMMARY AND CLOSURE REQUEST

Based upon the data provided by ASSI, the constituents of concern were horizontally and vertically delineated below the cleanup levels. The excavated area was backfilled and brought to grade with clean material. Based upon the response actions and laboratory analytical results, no additional investigation and/or remediation appears warranted at this time. ASI respectfully requests closure of the Site on behalf of COG. Copies of the Initial and Final C-141 are provided in Appendix D.



APPENDIX A

Figures

COG - COI Empire South Unit 15

Figure 1

4

Legend

COI Empire South Unit #15

COI Empire South Unit #15

BluestemRe





(360)



COG - COI Empire South Unit 15

Figure 3

Legend

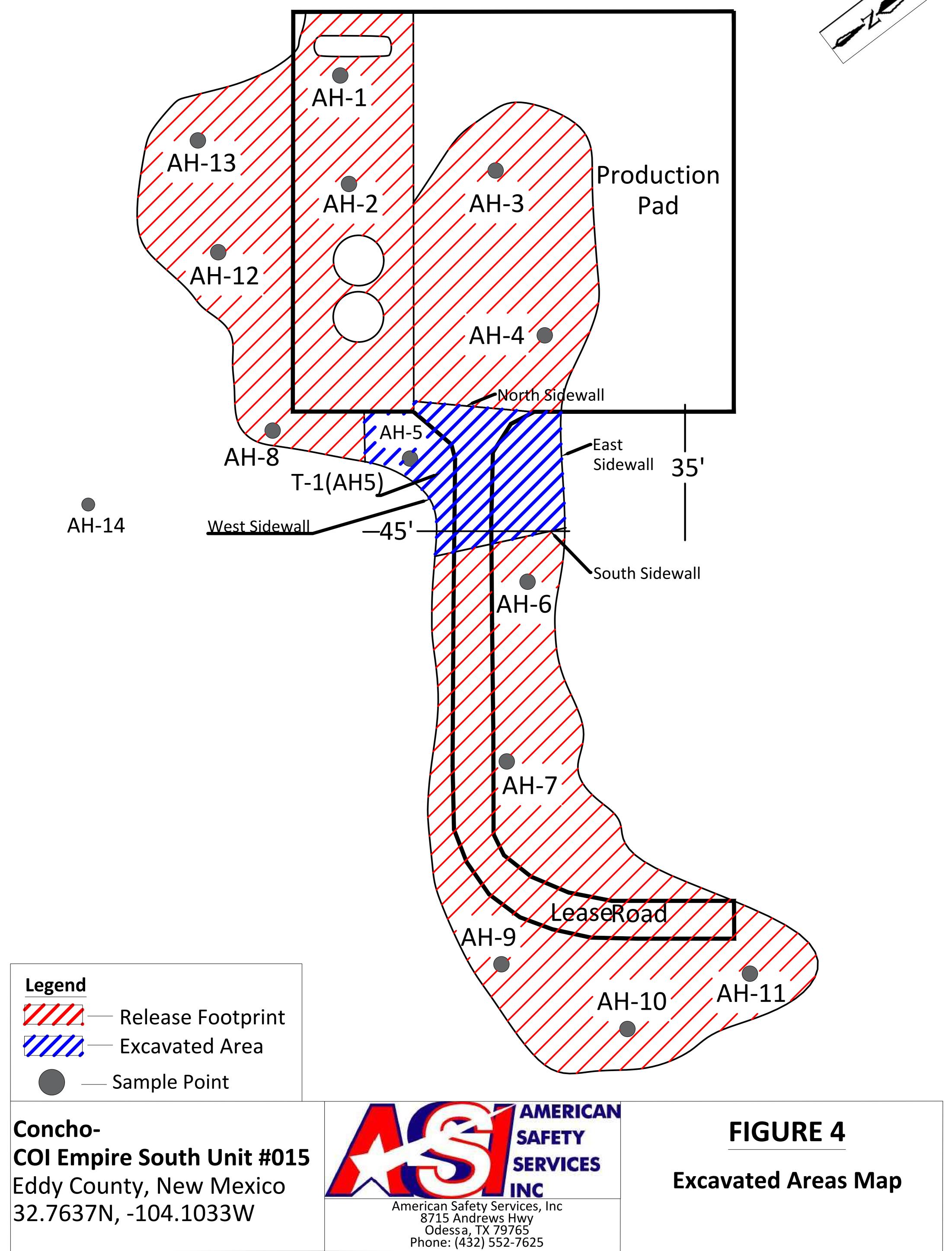
COI Empire South Unit #15
 Release Footprint

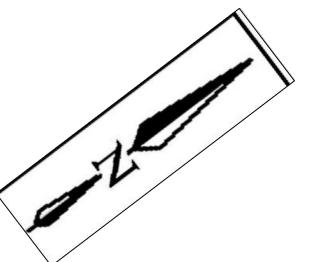
COI Empire South Unit #15

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92017 Google









APPENDIX B

Table 1

	TABLE 1 Summary of Delineation Sampling Analytical Results Concentrations of Benzene, BTEX, TPH & Chloride in Soil Concho Operating, LLC COI Empire South Unit #15 Eddy County, New Mexico NMOCD REF: #2RP-3894												
						8021B				8015M		300.0	
SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	SOIL STATUS	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	Total TPH (mg/Kg)	CHLORIDE (mg/Kg)	
NMOCD - Guid	elines for Remediati	ion of Leaks, Spills a	nd Releases	10	NE	NE	NE	50	NE	NE	5,000	600	
					Vertical Delin	ation Sampling							
AH-1	0'-1'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<50.0	242	242	144	
AH-1	1'-1.5'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	128	128	32.0	
AH-1	2'-2.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-	-	16.0	
AH-2	0'-1'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	25.8	25.8	48.0	
AH-2	1'-1.5'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	23.1	23.1	32.0	
AH-2	2'-2.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-	-	32.0	
AH-3	0'-1'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	68.6	68.6	128	
AH-3	1'-1.5'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	192	
AH-3	2'-2.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-	-	304	
AH-4	0'-1'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	35.8	35.8	<16.0	
AH-4	1'-1.5'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<16.0	
AH-4	2'-2.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-	-	<16.0	
AH-4	3'-3.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-	-	<16.0	
AH-5	0'-1'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	16.9	16.9	960	
AH-5	1'-1.5'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	752	
AH-5	2'-2.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-	-	736	
AH-5	3'-3.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-		864	
T-1 (AH5)(3.5'EB)	0-0.5'	8/21/2017	In-Situ	-	-	-	-	-	-	-	-	90.6	
T-1 (AH5)(3.5'EB)	0.5'-1'	8/21/2017	In-Situ	-	-	-	-	-	-	-	-	90.2	
T-1 (AH5)(3.5'EB)	1'-1.5'	8/21/2017	In-Situ	-	-	-	-	-	-	-	-	75.8	
AH-6	0'-1'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	18.7	18.7	16.0	
AH-6	1'-1.5'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	16.0	
AH-6	2'-2.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-	-	16.0	
AH-6	3'-3.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-	-	<16.0	
AH-7	0'-1'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	34.2	34.2	128	
AH-7	1'-1.5'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	16.0	
AH-7 mg/Kg - milligrams per Ki	2'-2.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-	-	16.0	

mg/Kg - milligrams per Kilogram

— = Not Established

Excavated Depth

Concentrations in **BOLD** exceed the NMOCD Guidelines

In-Situ = sample collected in place

	TABLE 1 Summary of Delineation Sampling Analytical Results Concentrations of Benzene, BTEX, TPH & Chloride in Soil Concho Operating, LLC COI Empire South Unit #15 Eddy County, New Mexico NMOCD REF: #2RP-3894												
8021B 8015M												300.0	
SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	SOIL STATUS	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	Total TPH (mg/Kg)	CHLORIDE (mg/Kg)	
NMOCD - Guid	elines for Remediati	ion of Leaks, Spills a	nd Releases	10	NE	NE	NE	50	NE	NE	5,000	600	
					Vertical Delin	ation Sampling							
AH-8	0'-1'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<16.0	
AH-8	1'-1.5'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	48.0	
AH-8	2'-2.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-	-	32.0	
AH-9	0'-1'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	27.5	27.5	<16.0	
AH-9	1'-1.5'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<16.0	
AH-9	2'-2.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-	-	<16.0	
AH-10	0'-1'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	717	717	<16.0	
AH-10	1'-1.5'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	59.5	59.5	16.0	
AH-10	2'-2.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-	-	32.0	
AH-11	0'-1'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	115	115	<16.0	
AH-11	1'-1.5'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	17.5	17.5	16.0	
AH-11	2'-2.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-	-	<16.0	
AH-12	0'-1'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	20.4	20.4	<16.0	
AH-12	1'-1.5'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<16.0	
AH-12	2'-2.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-	-	<16.0	
AH-13	0'-1'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.0	
AH-13	1'-1.5'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<16.0	
AH-13	2'-2.5'	9/21/2016	In-Situ	-	-	-	-	-	-	-	-	<16.0	
AH-14	0'-1'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<16.0	
AH-14	1'-1.5'	9/21/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<16.0	
North Sidewall	-	8/21/2017	In-situ	-	-	-	-	-	-	-	-	ND	
South Sidewall	-	8/21/2017	In-situ	-	-	-	-	-	-	-	-	ND	
East Sidewall	-	8/21/2017	In-situ	-	-	-	-	-	-	-	-	98.6	
West Sidewall	-	8/21/2017	In-situ	-	-	-	-	-	-	-	-	ND	

mg/Kg - milligrams per Kilogram

– = Not Established

Proposed Excavation Depth

Concentrations in **BOLD** exceed the NMOCD Guidelines

ND = non detect

In-situ = sample collected in place



APPENDIX C

Laboratory Analysis



September 28, 2016

DAKOTA NEEL

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: EMPIRE SOUTH UNIT #15

Enclosed are the results of analyses for samples received by the laboratory on 09/21/16 15:00.

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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. Keine

Celey D. Keene Lab Director/Quality Manager



COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210	Project: Project Number: Project Manager: Fax To:	DAKOTA NEEL	Reported: 28-Sep-16 11:12
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Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH-1 (0-1')	H602120-01	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-1 (1-1.5')	H602120-02	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-1 (2-2.5')	H602120-03	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-2 (0-1')	H602120-04	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-2 (1-1.5')	H602120-05	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-2 (2-2.5')	H602120-06	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-3 (0-1')	H602120-07	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-3 (1-1.5')	H602120-08	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-3 (2-2.5')	H602120-09	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-4 (0-1')	H602120-10	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-4 (1-1.5')	H602120-11	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-4 (2-2.5')	H602120-12	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-4 (3-3.5')	H602120-13	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-5 (0-1')	H602120-14	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-5 (1-1.5')	H602120-15	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-5 (2-2.5')	H602120-16	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-5 (3-3.5')	H602120-17	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-6 (0-1')	H602120-18	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-6 (1-1.5')	H602120-19	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-6 (2-2.5')	H602120-20	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-6 (3-3.5')	H602120-21	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-7 (0-1')	H602120-22	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-7 (1-1.5')	H602120-23	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-7 (2-2.5')	H602120-24	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-8 (0-1')	H602120-25	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-8 (1-1.5')	H602120-26	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-8 (2-2.5')	H602120-27	Soil	21-Sep-16 00:00	21-Sep-16 15:00

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210		Project: Project Number: Project Manager: Fax To:	DAKOTA NEEL	Reported: 28-Sep-16 11:12
AH-9 (0-1')	H602120-28	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-9 (1-1.5')	H602120-29	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-9 (2-2.5')	H602120-30	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-10 (0-1')	H602120-31	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-10 (1-1.5')	H602120-32	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-10 (2-2.5')	H602120-33	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-11 (0-1')	H602120-34	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-11 (1-1.5')	H602120-35	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-11 (2-2.5')	H602120-36	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-12 (0-1')	H602120-37	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-12 (1-1.5')	H602120-38	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-12 (2-2.5')	H602120-39	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-13 (0-1')	H602120-40	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-13 (1-1.5')	H602120-41	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-13 (2-2.5')	H602120-42	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-14 (0-1')	H602120-43	Soil	21-Sep-16 00:00	21-Sep-16 15:00
AH-14 (1-1.5')	H602120-44	Soil	21-Sep-16 00:00	21-Sep-16 15:00

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana	ber: NOI	NE GIVEN KOTA NEEL	H UNIT #1	5	2	Reported: 28-Sep-16 11:	12
				(-1) (0-1') (20-01 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	144		16.0	mg/kg	4	6092306	AC	23-Sep-16	4500-Cl-B	
Volatile Organic Compounds	by EPA Method 80)21								
Benzene*	< 0.050		0.050	mg/kg	50	6092301	MS	23-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092301	MS	23-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092301	MS	23-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092301	MS	23-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092301	MS	23-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PI	D)		96.7 %	73.6	-140	6092301	MS	23-Sep-16	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10	<50.0		50.0	mg/kg	5	6092201	MS	22-Sep-16	8015B	
DRO >C10-C28	242		50.0	mg/kg	5	6092201	MS	22-Sep-16	8015B	
Surrogate: 1-Chlorooctane			70.0 %	35-	147	6092201	MS	22-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			101 %	28-	171	6092201	MS	22-Sep-16	8015B	

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COG OPERATINGProject:EMPIRE SOUTH UNIT #15Reported:P. O. BOX 1630Project Number:NONE GIVEN28-Sep-16 11:12ARTESIA NM, 88210Project Manager:DAKOTA NEELFax To:NONE										
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	32.0		16.0	mg/kg	4	6092306	AC	23-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092301	MS	23-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092301	MS	23-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092301	MS	23-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092301	MS	23-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092301	MS	23-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			96.4 %	73.6	-140	6092301	MS	23-Sep-16	8021B	
Petroleum Hydrocarbons by GO	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092201	MS	22-Sep-16	8015B	
DRO >C10-C28	128		10.0	mg/kg	1	6092201	MS	22-Sep-16	8015B	
Surrogate: 1-Chlorooctane			84.6 %	35-	147	6092201	MS	22-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			101 %	28-	171	6092201	MS	22-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Nun Project Mana	ber: NC	EMPIRE SOUTH UNIT #15 NONE GIVEN DAKOTA NEEL NONE				Reported: 28-Sep-16 11:12		
AH-1 (2-2.5') H602120-03 (Soil)											
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes	
Cardinal Laboratories											
Inorganic Compounds											
Chloride	16.0		16.0	mg/kg	4	6092306	AC	23-Sep-16	4500-Cl-B		

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax	ber: NOI	KOTA NEEL NE		5	2	Reported: 28-Sep-16 11:	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	48.0		16.0	mg/kg	4	6092306	AC	23-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			98.2 %	73.6	-140	6092302	MS	23-Sep-16	8021B	
Petroleum Hydrocarbons by GO	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092201	MS	22-Sep-16	8015B	
DRO >C10-C28	25.8		10.0	mg/kg	1	6092201	MS	22-Sep-16	8015B	
Surrogate: 1-Chlorooctane			86.0 %	35-	147	6092201	MS	22-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			99.9 %	28-	171	6092201	MS	22-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax AH-	, iber: NOI	KOTA NEEL NE ')	-	5	2	Reported: 28-Sep-16 11:	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	32.0		16.0	mg/kg	4	6092306	AC	23-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			97.1 %	73.6	-140	6092302	MS	23-Sep-16	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	22-Sep-16	8015B	
DRO >C10-C28	23.1		10.0	mg/kg	1	6092202	MS	22-Sep-16	8015B	
Surrogate: 1-Chlorooctane			83.6 %	35-	147	6092202	MS	22-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			93.5 %	28-	171	6092202	MS	22-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana	ber: NC	KOTA NEEL		5	2	Reported: 28-Sep-16 11:	12
				-2 (2-2.: 120-06 (S	,					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Labora	atories					
Inorganic Compounds										
Chloride	32.0		16.0	mg/kg	4	6092306	AC	23-Sep-16	4500-Cl-B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax	ber: NOI	KOTA NEEL NE		5	2	Reported: 28-Sep-16 11:	12
			11002	120-07 (30	, iii j]
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	128		16.0	mg/kg	4	6092306	AC	23-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	y EPA Method 8	3021								
Benzene*	< 0.050		0.050	mg/kg	50	6092602	MS	27-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092602	MS	27-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092602	MS	27-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092602	MS	27-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092602	MS	27-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			98.0 %	73.6	-140	6092602	MS	27-Sep-16	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092705	MS	27-Sep-16	8015B	
DRO >C10-C28	68.6		10.0	mg/kg	1	6092705	MS	27-Sep-16	8015B	
Surrogate: 1-Chlorooctane			81.1 %	35-	147	6092705	MS	27-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			96.7 %	28-	171	6092705	MS	27-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax AH-	ber: NOI	KOTA NEEL NE ')		5	2	Reported: 28-Sep-16 11:	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	192		16.0	mg/kg	4	6092306	AC	23-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092602	MS	27-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092602	MS	27-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092602	MS	27-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092602	MS	27-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092602	MS	27-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			97.8 %	73.6	-140	6092602	MS	27-Sep-16	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092705	MS	27-Sep-16	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	6092705	MS	27-Sep-16	8015B	
Surrogate: 1-Chlorooctane			88.0 %	35-	147	6092705	MS	27-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			106 %	28-	171	6092705	MS	27-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana	ber: N	AKOTA NEEL		5	2	Reported: 28-Sep-16 11:	12
				3 (2-2. 20-09 (,					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Labor	atories					
Inorganic Compounds										
Chloride	304		16.0	mg/kg	4	6092306	AC	23-Sep-16	4500-Cl-B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax	, ber: NOI	Kota neel Ne	-	5	2	Reported: 28-Sep-16 11:	12
				120-10 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092306	AC	23-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	y EPA Method 8	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			97.7 %	73.6	-140	6092302	MS	23-Sep-16	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	35.8		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			86.9 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			95.7 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax AH-	, ber: NOI	KOTA NEEL NE ')	-	5	2	Reported: 28-Sep-16 11:7	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092306	AC	23-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			98.2 %	73.6	-140	6092302	MS	23-Sep-16	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			87.1 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			94.5 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Numb Project Manag	er: N	AKOTA NEEL	HUNIT #1	5	2	Reported: 28-Sep-16 11	:12
			AH-4 H60212		,					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardinal	Labor	ratories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092306	AC	23-Sep-16	4500-Cl-B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana	oer: NO	AKOTA NEEL		5	2	Reported: 28-Sep-16 11	:12
				4 (3-3. 20-13 (\$,					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	Labor	atories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092306	AC	23-Sep-16	4500-Cl-B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax	, ber: NOI	KOTA NEEL NE	-	5	2	Reported: 28-Sep-16 11:	12
			Reporting Limit							
Analyte	Result	MDL	Ĺimit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	960		16.0	mg/kg	4	6092306	AC	23-Sep-16	4500-Cl-B	
Volatile Organic Compounds b	oy EPA Method 8	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			94.7 %	73.6	-140	6092302	MS	23-Sep-16	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	16.9		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			87.2 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			102 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax AH-	, iber: NOI	KOTA NEEL NE ')	-	5	2	Reported: 28-Sep-16 11:7	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	752		16.0	mg/kg	4	6092306	AC	23-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			96.8 %	73.6	-140	6092302	MS	23-Sep-16	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			85.2 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			93.5 %	28-	171	6092202	MS	23-Sep-16	8015B	

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Celey D. Keene, Lab Director/Quality Manager



COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana	ber: N ger: D	Empire South Unit #15 None Given Dakota Neel None				Reported: 28-Sep-16 11:12		
AH-5 (2-2.5') H602120-16 (Soil)											
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes	
Cardinal Laboratories											
Inorganic Compounds											
Chloride	736		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B		

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Celey D. Keene, Lab Director/Quality Manager



COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana	ber: N ger: D	Empire South Unit #15 None Given Dakota Neel None				Reported: 28-Sep-16 11:12		
AH-5 (3-3.5') H602120-17 (Soil)											
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes	
Cardinal Laboratories											
Inorganic Compounds											
Chloride	864		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B		

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COG OPERATING Project: EMPIRE SOUTH UNIT #15 Reported: P. O. BOX 1630 Project Number: NONE GIVEN 28-Sep-16 11:12 ARTESIA NM, 88210 Project Manager: DAKOTA NEEL Fax To: NONE AH-6 (0-1') H602120-18 (Soil) How Project (Soil) How Project (Soil)										12
			H002	120-18 (80	011)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	16.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds b	<u>y EPA Method 8</u>	3021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		95.7 %	73.6-140		6092302	MS	23-Sep-16	8021B		
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	18.7		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			80.4 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			89.2 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax AH-	, iber: NOI	KOTA NEEL NE ')	-	5	2	Reported: 28-Sep-16 11:	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Anaryic	Kesun	MDL	LIIIII	Onits	Difution	Batti	Anaryst	Anaryzeu	wentou	THORES
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	16.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			97.3 %	73.6	-140	6092302	MS	23-Sep-16	8021B	
Petroleum Hydrocarbons by GO	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			84.6 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			94.2 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana	ber: N	AKOTA NEEL		5	2	Reported: 28-Sep-16 11	12
				6 (2-2. 120-20 (,					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Labor	atories					
Inorganic Compounds										
Chloride	16.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana	ber: NO	KOTA NEEL		5	2	Reported: 28-Sep-16 11:	12
				·6 (3-3.5 120-21 (S	<i>,</i>					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Labora	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax	ber: NOI	KOTA NEEL NE		5	2	Reported: 28-Sep-16 11:7	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	128		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	y EPA Method 8	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	23-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			96.7 %	73.6	-140	6092302	MS	23-Sep-16	8021B	
Petroleum Hydrocarbons by Ge	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	34.2		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			86.4 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			95.2 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax AH-	ber: NOI	(OTA NEEL NE ()		5	2	Reported: 28-Sep-16 11:7	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	16.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			96.7 %	73.6	-140	6092302	MS	24-Sep-16	8021B	
Petroleum Hydrocarbons by GO	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			86.8 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			99.1 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Nun Project Mana	ber: NC	KOTA NEEL		5	2	Reported: 28-Sep-16 11:	12
				-7 (2-2. 120-24 (S	,					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	al Labora	atories					
Inorganic Compounds										
Chloride	16.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax	, ber: NOI	Kota neel Ne	-	5	2	Reported: 28-Sep-16 11:	12
			H602 1	120-25 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds b	y EPA Method 8	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			97.2 %	73.6	5-140	6092302	MS	24-Sep-16	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			81.5 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			93.3 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax AH-	, iber: NOI	KOTA NEEL NE ')	-	5	2	Reported: 28-Sep-16 11:	12
	D li		Reporting Limit							N
Analyte	Result	MDL	Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	48.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	y EPA Method 8	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			97.2 %	73.6	-140	6092302	MS	24-Sep-16	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			69.9 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			77.2 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana	ber: N	AKOTA NEEL	H UNIT #1	5	2	Reported: 28-Sep-16 11:	12
				·8 (2-2. 120-27 (
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Labor	atories					
Inorganic Compounds										
Chloride	32.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax	, ber: NOI	Kota neel Ne	-	5	2	Reported: 28-Sep-16 11:	12
			H6021	120-28 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds b	y EPA Method 8	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			96.3 %	73.6	-140	6092302	MS	24-Sep-16	8021B	
<u>Petroleum Hydrocarbons by G</u>	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	27.5		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			84.0 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			94.2 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax AH-	, iber: NOI	KOTA NEEL NE ')	-	5	2	Reported: 28-Sep-16 11:	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			96.5 %	73.6	-140	6092302	MS	24-Sep-16	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			85.1 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			95.2 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana	ber: NO	KOTA NEEL		5	2	Reported: 28-Sep-16 11:	12
				-9 (2-2.5 120-30 (S	,					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Labora	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax	, iber: NOI	KOTA NEEL NE	-	5	2	Reported: 28-Sep-16 11:	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			95.9 %	73.6	-140	6092302	MS	24-Sep-16	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	717		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			86.3 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			111 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax AH-	ber: NOI	KOTA NEEL NE 5')		5	2	Reported: 28-Sep-16 11:	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	16.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			96.6 %	73.6	-140	6092302	MS	24-Sep-16	8021B	
Petroleum Hydrocarbons by GO	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	59.5		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			78.9 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			95.1 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Nun Project Mana	ber: NC	KOTA NEEL		5	2	Reported: 28-Sep-16 11:	12
				10 (2-2. 120-33 (S	<i>.</i>					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Labora	tories					
Inorganic Compounds										
Chloride	32.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax	, ber: NOI	KOTA NEEL NE	-	5	2	Reported: 28-Sep-16 11:	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	y EPA Method 8	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			96.0 %	73.6	-140	6092302	MS	24-Sep-16	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	115		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			79.1 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			98.6 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax AH-	, ber: NOI	KOTA NEEL NE	-	5	2	Reported: 28-Sep-16 11:7	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	16.0		16.0	mg/kg	4	6092307	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			96.9 %	73.6	-140	6092302	MS	24-Sep-16	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	17.5		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			79.5 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			94.3 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana	ber: NO	KOTA NEEL		5	2	Reported: 28-Sep-16 11:	12
				11 (2-2.: 120-36 (S						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Labora	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092308	AC	26-Sep-16	4500-Cl-B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax	, ber: NOI	Kota neel Ne	-	5	2	Reported: 28-Sep-16 11:	12
			H602 1	120-37 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092308	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method 8	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			97.5 %	73.6	-140	6092302	MS	24-Sep-16	8021B	
Petroleum Hydrocarbons by GO	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	20.4		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			80.4 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			93.4 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax AH-	ber: NOI	KOTA NEEL NE		5	2	Reported: 28-Sep-16 11:	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092308	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092302	MS	24-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			95.9 %	73.6	-140	6092302	MS	24-Sep-16	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			80.1 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			95.2 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana	ber: NO	KOTA NEEL		5	2	Reported: 28-Sep-16 11:	12
				12 (2-2.: 120-39 (S						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Labora	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092308	AC	26-Sep-16	4500-Cl-B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax	, iber: NOI	KOTA NEEL NE	-	5	2	Reported: 28-Sep-16 11:7	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	32.0		16.0	mg/kg	4	6092308	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method 8	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			96.8 %	73.6	-140	6092303	MS	24-Sep-16	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			83.8 %	35-	147	6092202	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			99.8 %	28-	171	6092202	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax AH-	, ber: NOI	KOTA NEEL NE	-	5	2	Reported: 28-Sep-16 11:7	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092308	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			97.3 %	73.6	-140	6092303	MS	24-Sep-16	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092203	MS	23-Sep-16	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	6092203	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			72.2 %	35-	147	6092203	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			86.4 %	28-	171	6092203	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana	ber: NO	KOTA NEEL		5	2	Reported: 8-Sep-16 11:	12
				13 (2-2.5 120-42 (Se	·					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Labora	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092308	AC	26-Sep-16	4500-Cl-B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax	, iber: NOI	KOTA NEEL NE ')	-	5	2	Reported: 28-Sep-16 11:	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092308	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			97.8 %	73.6	-140	6092303	MS	24-Sep-16	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092203	MS	23-Sep-16	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	6092203	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			74.2 %	35-	147	6092203	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			86.5 %	28-	171	6092203	MS	23-Sep-16	8015B	

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COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210			Project Num Project Mana Fax AH-	, ber: NOI	KOTA NEEL NE	-	5	2	Reported: 28-Sep-16 11:7	12
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	6092308	AC	26-Sep-16	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	6092303	MS	24-Sep-16	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			97.1 %	73.6	-140	6092303	MS	24-Sep-16	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10	<10.0		10.0	mg/kg	1	6092203	MS	23-Sep-16	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	6092203	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctane			77.0 %	35-	147	6092203	MS	23-Sep-16	8015B	
Surrogate: 1-Chlorooctadecane			88.9 %	28-	171	6092203	MS	23-Sep-16	8015B	

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COG OPERATINGProject:EMPIRE SOUTH UNIT #15P. O. BOX 1630Project Number:NONE GIVENARTESIA NM, 88210Project Manager:DAKOTA NEELFax To:NONE	Reported: 28-Sep-16 11:12
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Inorganic Compounds - Quality Control

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	D b	Reporting	T T 1	Spike	Source	AVDEC.	%REC	DDD	RPD	N T (
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6092306 - 1:4 DI Water										
Blank (6092306-BLK1)				Prepared &	Analyzed:	23-Sep-16				
Chloride	ND	16.0	mg/kg							
LCS (6092306-BS1)				Prepared &	Analyzed:	23-Sep-16				
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (6092306-BSD1)				Prepared &	Analyzed:	23-Sep-16				
Chloride	464	16.0	mg/kg	400		116	80-120	7.14	20	
Duplicate (6092306-DUP1)	Sourc	e: H602103	-02	Prepared &	Analyzed:	23-Sep-16				
Chloride	336	16.0	mg/kg		352			4.65	20	
Matrix Spike (6092306-MS1)	Sourc	e: H602103	-02	Prepared &	Analyzed:	23-Sep-16				
Chloride	752	16.0	mg/kg	400	352	100	80-120			
Batch 6092307 - 1:4 DI Water										
Blank (6092307-BLK1)				Prepared: 2	23-Sep-16 A	nalyzed: 2	6-Sep-16			
Chloride	ND	16.0	mg/kg							
LCS (6092307-BS1)				Prepared: 2	23-Sep-16 A	nalyzed: 2	6-Sep-16			
Chloride	448	16.0	mg/kg	400		112	80-120			
LCS Dup (6092307-BSD1)				Prepared: 2	23-Sep-16 A	nalyzed: 2	6-Sep-16			
Chloride	448	16.0	mg/kg	400		112	80-120	0.00	20	
Duplicate (6092307-DUP1)	Sourc	e: H602120	-16	Prepared: 2	23-Sep-16 A	nalyzed: 2	6-Sep-16			
Chloride	768	16.0	mg/kg		736			4.26	20	

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Celey D. Keene, Lab Director/Quality Manager



COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210		Project Nu Project Ma	umber:	empire sou None givei Dakota ne None	N	#15			Reported: 3-Sep-16 11:12		
	Inorg			- Quality (oratories	Control						
		Reporting		Spike	Source		%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch 6092307 - 1:4 DI Water											
Matrix Spike (6092307-MS1)	Source	e: H602120-	-16	Prepared: 2	23-Sep-16 A	nalyzed: 2	6-Sep-16				
Chloride	1170	16.0	mg/kg	400	736	108	80-120				
Batch 6092308 - 1:4 DI Water											
Blank (6092308-BLK1)				Prepared: 2	23-Sep-16 A	nalyzed: 2	6-Sep-16				
Chloride	ND	16.0	mg/kg								
LCS (6092308-BS1)				Prepared: 2	23-Sep-16 A	analyzed: 2	6-Sep-16				
Chloride	432	16.0	mg/kg	400		108	80-120				
LCS Dup (6092308-BSD1)				Prepared: 2	23-Sep-16 A	analyzed: 2	6-Sep-16				
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20		
Duplicate (6092308-DUP1)	Source	e: H602120-	-36	Prepared: 2	23-Sep-16 A	nalyzed: 2	6-Sep-16				
Chloride	ND	16.0	mg/kg		0.00				20		
Matrix Spike (6092308-MS1)	Source	e: H602120-	-36	Prepared: 2	23-Sep-16 A	nalyzed: 2	6-Sep-16				
Chloride	432	16.0	mg/kg	400	0.00	108	80-120				

Cardinal Laboratories

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210	Project: Project Number: Project Manager: Fax To:	DAKOTA NEEL	Reported: 28-Sep-16 11:12
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Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6092301 - Volatiles										
Blank (6092301-BLK1)				Prepared &	Analyzed:	23-Sep-16	j			
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0513		mg/kg	0.0500		103	73.6-140			
LCS (6092301-BS1)				Prepared &	Analyzed:	23-Sep-16	i			
Benzene	1.78	0.050	mg/kg	2.00		89.0	82.6-122			
Toluene	1.81	0.050	mg/kg	2.00		90.3	72.9-122			
Ethylbenzene	1.72	0.050	mg/kg	2.00		86.1	65.4-131			
Total Xylenes	5.21	0.150	mg/kg	6.00		86.8	73.8-125			
Surrogate: 4-Bromofluorobenzene (PID)	0.0507		mg/kg	0.0500		101	73.6-140			
LCS Dup (6092301-BSD1)				Prepared &	Analyzed:	23-Sep-16	i			
Benzene	1.79	0.050	mg/kg	2.00		89.7	82.6-122	0.762	8.23	
Toluene	1.82	0.050	mg/kg	2.00		91.1	72.9-122	0.839	8.71	
Ethylbenzene	1.74	0.050	mg/kg	2.00		87.1	65.4-131	1.08	9.46	
Total Xylenes	5.26	0.150	mg/kg	6.00		87.7	73.8-125	1.07	8.66	
Surrogate: 4-Bromofluorobenzene (PID)	0.0495		mg/kg	0.0500		99.0	73.6-140			
Matrix Spike (6092301-MS1)	Sou	rce: H602100-	-08	Prepared &	Analyzed:	23-Sep-16	i			
Benzene	2.91	0.200	mg/kg	2.00	0.756	108	66.7-126			
Toluene	10.8	0.200	mg/kg	2.00	8.96	89.7	58.1-125			
Ethylbenzene	9.67	0.200	mg/kg	2.00	8.46	60.5	45.6-142			
Total Xylenes	39.5	0.600	mg/kg	6.00	35.6	65.1	52-138			
Surrogate: 4-Bromofluorobenzene (PID)	0.0665		mg/kg	0.0500		133	73.6-140			

Cardinal Laboratories

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210		Project: EMPI Project Number: NONE Project Manager: DAKC Fax To: NONE							Reported: Sep-16 1 ²	1:12
	Volatile Organic C		·		8021 - Qu	ality Cor	ntrol			
		Cardin	nal Lat	oratories						
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6092301 - Volatiles										
Matrix Spike Dup (6092301-MSD1)	Sou	rce: H602100-	-08	Prepared &	Analyzed:	23-Sep-16				
Benzene	2.98	0.200	mg/kg	2.00	0.756	111	66.7-126	2.34	12.2	
Toluene	11.1	0.200	mg/kg	2.00	8.96	106	58.1-125	3.02	18.1	
Ethylbenzene	9.98	0.200	mg/kg	2.00	8.46	76.1	45.6-142	3.17	33.4	
Total Xylenes	40.8	0.600	mg/kg	6.00	35.6	86.8	52-138	3.24	36.2	
Surrogate: 4-Bromofluorobenzene (PID)	0.0673		mg/kg	0.0500		135	73.6-140			
Batch 6092302 - Volatiles										
Blank (6092302-BLK1)				Prepared &	Analyzed:	23-Sep-16				
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	ND		mg/kg	0.0500		98.0	73.6-140			
LCS (6092302-BS1)				Prepared &	Analyzed:	23-Sep-16				
Benzene	2.22	0.050	mg/kg	2.00		111	82.6-122			
Toluene	2.24	0.050	mg/kg	2.00		112	72.9-122			
Ethylbenzene	2.14	0.050	mg/kg	2.00		107	65.4-131			
Total Xylenes	6.49	0.150	mg/kg	6.00		108	73.8-125			
Surrogate: 4-Bromofluorobenzene (PID)	0.0485		mg/kg	0.0500		97.0	73.6-140			
LCS Dup (6092302-BSD1)				Prepared &	Analyzed:	23-Sep-16				
Benzene	2.21	0.050	mg/kg	2.00		110	82.6-122	0.608	8.23	
Toluene	2.25	0.050	mg/kg	2.00		112	72.9-122	0.304	8.71	
Ethylbenzene	2.16	0.050	mg/kg	2.00		108	65.4-131	0.858	9.46	
Total Xylenes	6.54	0.150	mg/kg	6.00		109	73.8-125	0.875	8.66	

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210	Project: Project Number: Project Manager: Fax To:	DAKOTA NEEL	Reported: 28-Sep-16 11:12
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Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal	Laboratori	es
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	P 1:	Reporting	T T	Spike	Source	0/050	%REC	000	RPD	N7 -
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6092302 - Volatiles										
Matrix Spike (6092302-MS1)	Sour	-ce: H602120-	·04	Prepared: 2	3-Sep-16 A	Analyzed: 2	4-Sep-16			
Benzene	1.94	0.050	mg/kg	2.00	ND	97.0	66.7-126			
Toluene	1.98	0.050	mg/kg	2.00	0.017	98.2	58.1-125			
Ethylbenzene	1.90	0.050	mg/kg	2.00	0.021	94.0	45.6-142			
Total Xylenes	5.72	0.150	mg/kg	6.00	0.027	94.9	52-138			
Surrogate: 4-Bromofluorobenzene (PID)	0.0490		mg/kg	0.0500		98.0	73.6-140			
Matrix Spike Dup (6092302-MSD1)	Sour	·ce: H602120-	-04	Prepared: 2	3-Sep-16 A	analyzed: 2	4-Sep-16			
Benzene	1.95	0.050	mg/kg	2.00	ND	97.5	66.7-126	0.463	12.2	
Toluene	1.98	0.050	mg/kg	2.00	0.017	98.2	58.1-125	0.0575	18.1	
Ethylbenzene	1.90	0.050	mg/kg	2.00	0.021	94.0	45.6-142	0.0505	33.4	
Total Xylenes	5.71	0.150	mg/kg	6.00	0.027	94.6	52-138	0.230	36.2	
Surrogate: 4-Bromofluorobenzene (PID)	0.0481		mg/kg	0.0500		96.1	73.6-140			
Batch 6092303 - Volatiles										
Blank (6092303-BLK1)				Prepared: 2	3-Sep-16 A	analyzed: 2	4-Sep-16			
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	ND		mg/kg	0.0500		96.2	73.6-140			
LCS (6092303-BS1)				Prepared: 2	3-Sep-16 A	nalyzed: 2	4-Sep-16			
Benzene	1.82	0.050	mg/kg	2.00		91.1	82.6-122			
Toluene	1.84	0.050	mg/kg	2.00		92.1	72.9-122			
Ethylbenzene	1.77	0.050	mg/kg	2.00		88.4	65.4-131			
Total Xylenes	5.32	0.150	mg/kg	6.00		88.7	73.8-125			
Surrogate: 4-Bromofluorobenzene (PID)	0.0487		mg/kg	0.0500		97.3	73.6-140			

Cardinal Laboratories

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210	Project: EMPIRE SOUTH UNIT #15 Project Number: NONE GIVEN Project Manager: DAKOTA NEEL Fax To: NONE								Reported: 28-Sep-16 11:12			
	Volatile Organic (•	·		021 - Qu	ality Co	ntrol					
			1ai Lai	Spiles	Source		%REC					
Analyte	Result	Reporting Limit	Units	Spike Level	Result	%REC	Limits	RPD	RPD Limit	Notes		
Batch 6092303 - Volatiles												
LCS Dup (6092303-BSD1)				Prepared: 2	3-Sep-16 A	Analyzed: 2	4-Sep-16					
Benzene	1.80	0.050	mg/kg	2.00		90.2	82.6-122	0.992	8.23			
Toluene	1.83	0.050	mg/kg	2.00		91.4	72.9-122	0.714	8.71			
Ethylbenzene	1.75	0.050	mg/kg	2.00		87.6	65.4-131	0.904	9.46			
Total Xylenes	5.27	0.150	mg/kg	6.00		87.8	73.8-125	1.05	8.66			
Surrogate: 4-Bromofluorobenzene (PID)	0.0487		mg/kg	0.0500		97.4	73.6-140					
Matrix Spike (6092303-MS1)	Sou	Prepared: 2	23-Sep-16 A	Analyzed: 2	4-Sep-16							
Benzene	2.20	0.050	mg/kg	2.00	ND	110	66.7-126					
Toluene	2.24	0.050	mg/kg	2.00	0.018	111	58.1-125					
Ethylbenzene	2.15	0.050	mg/kg	2.00	0.021	106	45.6-142					
Total Xylenes	6.51	0.150	mg/kg	6.00	0.036	108	52-138					
Surrogate: 4-Bromofluorobenzene (PID)	0.0494		mg/kg	0.0500		98.8	73.6-140					
Matrix Spike Dup (6092303-MSD1)	Sou	rce: H602120-	-40	Prepared: 2	3-Sep-16 A							
Benzene	2.24	0.050	mg/kg	2.00	ND	112	66.7-126	1.71	12.2			
Toluene	2.27	0.050	mg/kg	2.00	0.018	113	58.1-125	1.53	18.1			
Ethylbenzene	2.17	0.050	mg/kg	2.00	0.021	107	45.6-142	1.06	33.4			
Total Xylenes	6.56	0.150	mg/kg	6.00	0.036	109	52-138	0.773	36.2			
Surrogate: 4-Bromofluorobenzene (PID)	0.0493		mg/kg	0.0500		98.7	73.6-140					
Batch 6092602 - Volatiles												
Blank (6092602-BLK1)				Prepared: 2	26-Sep-16 A	Analyzed: 2	7-Sep-16					
Benzene	ND	0.050	mg/kg									
Toluene	ND	0.050	mg/kg									
Ethylbenzene	ND	0.050	mg/kg									
Total Xylenes	ND	0.150	mg/kg									
Total BTEX	ND	0.300	mg/kg									
Surrogate: 4-Bromofluorobenzene (PID)	ND		mg/kg	0.0500		96.5	73.6-140					

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210		EMPIRE SOUTH UNIT #15 NONE GIVEN DAKOTA NEEL NONE				Reported: 28-Sep-16 11:12					
Volatile Organic Compounds by EPA Method 8021 - Quality Control Cardinal Laboratories											
		Reporting		Spike	Source		%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch 6092602 - Volatiles											
LCS (6092602-BS1)	Prepared: 26-Sep-16 Analyzed: 2						7-Sep-16				
Benzene	2.31	0.050	mg/kg	2.00		115	82.6-122				
Toluene	2.34	0.050	mg/kg	2.00		117	72.9-122				
Ethylbenzene	2.24	0.050	mg/kg	2.00		112	65.4-131				
Total Xylenes	6.74	0.150	mg/kg	6.00		112	73.8-125				
Surrogate: 4-Bromofluorobenzene (PID)	0.0488		mg/kg	0.0500		97.5	73.6-140				
LCS Dup (6092602-BSD1)				Prepared: 2	6-Sep-16 A	analyzed: 2	7-Sep-16				
Benzene	2.31	0.050	mg/kg	2.00		116	82.6-122	0.272	8.23		
Toluene	2.34	0.050	mg/kg	2.00		117	72.9-122	0.0127	8.71		
Ethylbenzene	2.26	0.050	mg/kg	2.00		113	65.4-131	0.841	9.46		
Total Xylenes	6.79	0.150	mg/kg	6.00		113	73.8-125	0.682	8.66		
Surrogate: 4-Bromofluorobenzene (PID)	0.0484		mg/kg	0.0500		96.9	73.6-140				
Matrix Spike (6092602-MS1)	Sou	rce: H602134-	-12	Prepared: 26-Sep-16 Analyzed: 27-Sep-16							
Benzene	2.19	0.050	mg/kg	2.00	ND	109	66.7-126				
Toluene	2.22	0.050	mg/kg	2.00	0.012	111	58.1-125				
Ethylbenzene	2.14	0.050	mg/kg	2.00	0.024	106	45.6-142				
Total Xylenes	6.42	0.150	mg/kg	6.00	0.022	107	52-138				
Surrogate: 4-Bromofluorobenzene (PID)	0.0496		mg/kg	0.0500		99.2	73.6-140				
Matrix Spike Dup (6092602-MSD1)	Sou	rce: H602134-	-12	Prepared: 2	6-Sep-16 A	analyzed: 2	8-Sep-16				
Benzene	2.23	0.050	mg/kg	2.00	ND	111	66.7-126	1.73	12.2		
Toluene	2.27	0.050	mg/kg	2.00	0.012	113	58.1-125	2.21	18.1		
Ethylbenzene	2.20	0.050	mg/kg	2.00	0.024	109	45.6-142	2.49	33.4		
Total Xylenes	6.60	0.150	mg/kg	6.00	0.022	110	52-138	2.76	36.2		
Surrogate: 4-Bromofluorobenzene (PID)	0.0494		mg/kg	0.0500		98.8	73.6-140				

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210	Project: Project Number: Project Manager: Fax To:	DAKOTA NEEL	Reported: 28-Sep-16 11:12
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Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

	D k	Reporting	T T -4	Spike	Source	MARC .	%REC	DDD	RPD	N. (
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6092201 - General Prep - Organics										
Blank (6092201-BLK1)				Prepared &	& Analyzed:	22-Sep-16	5			
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	41.9		mg/kg	50.0		83.8	35-147			
Surrogate: 1-Chlorooctadecane	48.0		mg/kg	50.0		96.1	28-171			
LCS (6092201-BS1)				Prepared &	& Analyzed:	22-Sep-16	6			
GRO C6-C10	195	10.0	mg/kg	200		97.5	76.7-115			
DRO >C10-C28	203	10.0	mg/kg	200		102	78.3-122			
Total TPH C6-C28	398	10.0	mg/kg	400		99.5	79.8-117			
Surrogate: 1-Chlorooctane	50.7		mg/kg	50.0		101	35-147			
Surrogate: 1-Chlorooctadecane	55.6		mg/kg	50.0		111	28-171			
LCS Dup (6092201-BSD1)				Prepared &	& Analyzed:	22-Sep-16	6			
GRO C6-C10	194	10.0	mg/kg	200		96.8	76.7-115	0.733	9.42	
DRO >C10-C28	201	10.0	mg/kg	200		100	78.3-122	1.22	13.2	
Total TPH C6-C28	394	10.0	mg/kg	400		98.6	79.8-117	0.981	10.7	
Surrogate: 1-Chlorooctane	50.3		mg/kg	50.0		101	35-147			
Surrogate: 1-Chlorooctadecane	54.4		mg/kg	50.0		109	28-171			
Matrix Spike (6092201-MS1)	Sou	ırce: H602100	-09	Prepared &	k Analyzed:	22-Sep-16	5			
GRO C6-C10	218	10.0	mg/kg	200	126	45.9	66.4-123			QM-0
DRO >C10-C28	249	10.0	mg/kg	200	141	53.7	67.6-126			QM-0
Total TPH C6-C28	466	10.0	mg/kg	400	267	49.8	60.8-134			QM-0
Surrogate: 1-Chlorooctane	53.7		mg/kg	50.0		107	35-147			
Surrogate: 1-Chlorooctadecane	57.3		mg/kg	50.0		115	28-171			

Cardinal Laboratories

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210	Project: Project Number: Project Manager: Fax To:			DAKOTA NEEL				Reported: 28-Sep-16 11:12			
	Petroleum H	•	•		Quality C	ontrol					
	Cardinal Laboratories										
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch 6092201 - General Prep - Organics											
Matrix Spike Dup (6092201-MSD1)	Sour	ce: H602100-	-09	Prepared &	Analyzed:	22-Sep-16					
GRO C6-C10	219	10.0	mg/kg	200	126	46.5	66.4-123	1.34	10.2	QM-07	
DRO >C10-C28	252	10.0	mg/kg	200	141	55.3	67.6-126	2.84	11.6	QM-07	
Total TPH C6-C28	471	10.0	mg/kg	400	267	50.9	60.8-134	2.15	9.02	QM-07	
Surrogate: 1-Chlorooctane	54.0		mg/kg	50.0		108	35-147				
Surrogate: 1-Chlorooctadecane	57.9		mg/kg	50.0		116	28-171				
Batch 6092202 - General Prep - Organics											
Blank (6092202-BLK1)				Prepared &	Analyzed:	22-Sep-16					
GRO C6-C10	ND	10.0	mg/kg								
DRO >C10-C28	ND	10.0	mg/kg								
EXT DRO >C28-C35	ND	10.0	mg/kg								
Total TPH C6-C28	ND	10.0	mg/kg								
Surrogate: 1-Chlorooctane	42.1		mg/kg	50.0		84.2	35-147				
Surrogate: 1-Chlorooctadecane	47.9		mg/kg	50.0		95.8	28-171				
LCS (6092202-BS1)		Prepared &	22-Sep-16								
GRO C6-C10	194	10.0	mg/kg	200		97.1	76.7-115				
DRO >C10-C28	200	10.0	mg/kg	200		99.8	78.3-122				
Total TPH C6-C28	394	10.0	mg/kg	400		98.4	79.8-117				
Surrogate: 1-Chlorooctane	50.3		mg/kg	50.0		101	35-147				
Surrogate: 1-Chlorooctadecane	53.3		mg/kg	50.0		107	28-171				
LCS Dup (6092202-BSD1)				Prepared &	Analyzed:	22-Sep-16					
GRO C6-C10	194	10.0	mg/kg	200		97.2	76.7-115	0.115	9.42		
DRO >C10-C28	199	10.0	mg/kg	200		99.3	78.3-122	0.479	13.2		
Total TPH C6-C28	393	10.0	mg/kg	400		98.3	79.8-117	0.185	10.7		
Surrogate: 1-Chlorooctane	50.5		mg/kg	50.0		101	35-147				
	52.4			50.0		105	28-171				

Cardinal Laboratories

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210		Project: EMPIRE SOUTH UNIT #15 Project Number: NONE GIVEN Project Manager: DAKOTA NEEL Fax To: NONE					Reported: 28-Sep-16 11:12				
	Petroleum H	•	•	GC FID - (oratories	•	ontrol					
		Reporting		Spike	Source		%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch 6092202 - General Prep - Organic	28										
Matrix Spike (6092202-MS1)	Source: H602120-05			Prepared: 22-Sep-16 Analyzed: 23-Sep-16							
GRO C6-C10	190	10.0	mg/kg	200	ND	94.9	66.4-123				
DRO >C10-C28	231	10.0	mg/kg	200	23.1	104	67.6-126				
Total TPH C6-C28	421	10.0	mg/kg	400	24.2	99.1	60.8-134				
Surrogate: 1-Chlorooctane	52.4		mg/kg	50.0		105	35-147				
Surrogate: 1-Chlorooctadecane	56.4		mg/kg	50.0		113	28-171				
Matrix Spike Dup (6092202-MSD1)	Source: H602120-05			Prepared: 2	22-Sep-16 A						
GRO C6-C10	192	10.0	mg/kg	200	ND	95.8	66.4-123	0.995	10.2		
DRO >C10-C28	237	10.0	mg/kg	200	23.1	107	67.6-126	3.07	11.6		
Total TPH C6-C28	429	10.0	mg/kg	400	24.2	101	60.8-134	2.09	9.02		
Surrogate: 1-Chlorooctane	52.7		mg/kg	50.0		105	35-147				
Surrogate: 1-Chlorooctadecane	57.6		mg/kg	50.0		115	28-171				
Batch 6092203 - General Prep - Organio	28										
Blank (6092203-BLK1)				Prepared: 2	22-Sep-16 A						
GRO C6-C10	ND	10.0	mg/kg								
DRO >C10-C28	ND	10.0	mg/kg								
EXT DRO >C28-C35	ND	10.0	mg/kg								
Total TPH C6-C28	ND	10.0	mg/kg								
Surrogate: 1-Chlorooctane	37.2		mg/kg	50.0		74.5	35-147				
Surrogate: 1-Chlorooctadecane	44.1		mg/kg	50.0		88.3	28-171				
LCS (6092203-BS1)		Prepared & Analyzed: 22-Sep-16									
GRO C6-C10	178	10.0	mg/kg	200		89.2	76.7-115				
DD0 - 010 000	156	10.0	4	200			70 2 1 22				

Surrogate: 1-Chlorooctane Surrogate: 1-Chlorooctadecane

DRO >C10-C28

Total TPH C6-C28

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176

354

43.7

31.5

10.0

10.0

mg/kg

mg/kg

mg/kg

mg/kg

200

400

50.0

50.0

88.0

88.6

87.4

63.0

78.3-122

79.8-117

35-147

28-171

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210	Project: Project Number: Project Manager: Fax To:			DAKOTA NEEL				Reported: 28-Sep-16 11:12		
	Petroleum Hydrocarbons by GC FID - Quality Control Cardinal Laboratories									
			ial Lai							
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6092203 - General Prep - Organics										
LCS Dup (6092203-BSD1)				Prepared & Analyzed: 22-Sep-16						
GRO C6-C10	193	10.0	mg/kg	200		96.5	76.7-115	7.92	9.42	
DRO >C10-C28	193	10.0	mg/kg	200		96.3	78.3-122	8.92	13.2	
Total TPH C6-C28	386	10.0	mg/kg	400		96.4	79.8-117	8.42	10.7	
Surrogate: 1-Chlorooctane	48.9		mg/kg	50.0		97.8	35-147			
Surrogate: 1-Chlorooctadecane	41.3		mg/kg	50.0		82.6	28-171			
Matrix Spike (6092203-MS1)	Source: H602120-41			Prepared: 22-Sep-16 Analyzed: 23-Sep-16						
GRO C6-C10	187	10.0	mg/kg	200	ND	93.7	66.4-123			
DRO >C10-C28	183	10.0	mg/kg	200	4.37	89.3	67.6-126			
Total TPH C6-C28	370	10.0	mg/kg	400	5.35	91.3	60.8-134			
Surrogate: 1-Chlorooctane	47.8		mg/kg	50.0		95.7	35-147			
Surrogate: 1-Chlorooctadecane	51.3		mg/kg	50.0		103	28-171			
Matrix Spike Dup (6092203-MSD1)	Sou	rce: H602120-	41	50.0 103 28-171 Prepared: 22-Sep-16 Analyzed: 23-Sep-16						
GRO C6-C10	189	10.0	mg/kg	200	ND	94.3	66.4-123	0.611	10.2	
DRO >C10-C28	188	10.0	mg/kg	200	4.37	91.6	67.6-126	2.53	11.6	
Total TPH C6-C28	376	10.0	mg/kg	400	5.35	92.7	60.8-134	1.55	9.02	
Surrogate: 1-Chlorooctane	48.4		mg/kg	50.0		96.8	35-147			
Surrogate: 1-Chlorooctadecane	52.8		mg/kg	50.0		106	28-171			
Batch 6092705 - General Prep - Organics										
Blank (6092705-BLK1)				Prepared & Analyzed: 27-Sep-16						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	44.0		mg/kg	50.0		88.0	35-147			
Surrogate: 1-Chlorooctadecane	52.2		mg/kg	50.0		104	28-171			

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

COG OPERATING P. O. BOX 1630 ARTESIA NM, 88210	Project: EMPIRE SOUTH UNIT #15 Project Number: NONE GIVEN Project Manager: DAKOTA NEEL Fax To: NONE					Reported: 28-Sep-16 11:12				
	Petroleum	·	·	-	Quality C	ontrol				
		Cardin	ial Lab	oratories						
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6092705 - General Prep - Organics										
LCS (6092705-BS1)		Prepared & Analyzed: 27-Sep-16								
GRO C6-C10	203	10.0	mg/kg	200	2	102	76.7-115			
DRO >C10-C28	202	10.0	mg/kg	200		101	78.3-122			
Total TPH C6-C28	405	10.0	mg/kg	400		101	79.8-117			
urrogate: 1-Chlorooctane	52.3		mg/kg	50.0		105	35-147			
urrogate: 1-Chlorooctadecane	53.8		mg/kg	50.0		108	28-171			
LCS Dup (6092705-BSD1)				Prepared & Analyzed: 27-Sep-16						
GRO C6-C10	207	10.0	mg/kg	200		104	76.7-115	2.03	9.42	
DRO >C10-C28	205	10.0	mg/kg	200		103	78.3-122	1.80	13.2	
Total TPH C6-C28	412	10.0	mg/kg	400		103	79.8-117	1.91	10.7	
Surrogate: 1-Chlorooctane	56.0		mg/kg	50.0		112	35-147			
urrogate: 1-Chlorooctadecane	57.0		mg/kg	50.0		114	28-171			
Matrix Spike (6092705-MS1)	Sou	rce: H602120-	-07	Prepared & Analyzed: 27-Sep-16						
GRO C6-C10	178	10.0	mg/kg	200	ND	88.8	66.4-123			
DRO >C10-C28	223	10.0	mg/kg	200	68.6	77.0	67.6-126			
Total TPH C6-C28	400	10.0	mg/kg	400	69.6	82.6	60.8-134			
Surrogate: 1-Chlorooctane	40.0		mg/kg	50.0		79.9	35-147			
Surrogate: 1-Chlorooctadecane	42.5		mg/kg	50.0		85.1	28-171			
Matrix Spike Dup (6092705-MSD1)	Sou	rce: H602120-	-07	Prepared &	Analyzed:	27-Sep-16				
GRO C6-C10	171	10.0	mg/kg	200	ND	85.5	66.4-123	3.74	10.2	
DRO >C10-C28	218	10.0	mg/kg	200	68.6	74.5	67.6-126	3.33	11.6	
Total TPH C6-C28	389	10.0	mg/kg	400	69.6	79.7	60.8-134	3.56	9.02	
Surrogate: 1-Chlorooctane	38.3		mg/kg	50.0		76.7	35-147			
Surrogate: 1-Chlorooctadecane	40.6		mg/kg	50.0		81.1	28-171			

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

Laboratories

101 East Marland, Hobbs, NM 88240

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

(5	(575) 393-2326 FAX (575) 393-2476			
Company Name:	6061		BILL TO	ANALYSIS REQUEST
Project Manager:	Dakota Neel		P.O. #:	
Address:	,		Company: CCS	
City:	State:	Zip:	Attn: Robert Mc/14	61
Phone #:	Fax #:		Address:	
Project #:	Project Owner:		city: Midland	
ame:	Empire South Unit #	13	State: 1 Zip:	
Project Location:	Edd, lo Non		Phone #:	
Sampler Name:	River Rich		Fax #:	
FOR LAB USE ONLY		MATRIX	PRESERV. SAMPLING	NG
Lab I.D.	Sample I.D.	OR (C)OMP AINERS DWATER WATER	: ASE: DOL	H TEX loride
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t	At 2 (0-1)	< / ×	~	XXX
S.	((1-15)	6 / <	~	× × ×
6	4 (2.25)	6 / 2	*	
2	A43 (0-1)	C ×	~	
B	(6	人.	
2	or (2.2.5)	× 19	e	
-10-1	Ang (on)	e v	7	VXX V Duplicate
PLEASE NOTE: Liability and Damages. analyses. All claims including those for r service. In no event shall Cardinal be fia affiliates or successors arising out of or r	Cardinal's liability and client's exo regligence and any other cause w ble for incidental or consequental elated to the performance of servi	ny claim arising whether based in contra- leemed waived unless made in writing a without limitation, business interruption ardinal recardless of whether such clait	stusive remedy for any claim arising whether based in contract or tort, shall be limited to have a court paid by the client for i hastoever shall be deemed waived unless made in writing and received by Cardinal writinii 30 days after completion of the damages, including without limitation, business interruptione, loss of use, or loss of portis incurred by client, its subsidiar one hereunder by Cardinal negatives of whether such claim is based upon any of the above stated reasons of othere	d by the client for the r completion of the applicable Allent, its subsidiaries, soors or otherwise.
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	Time:			If TPH exceeds 5,000 mg/lien, Benzene exceeds
Delivered By: (Circle One)	Ç	A b Cool Intact	Ittion CHECKED BY:	to my/is or Total BTEX exacts 50 mg/is man

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 395-2326

Sampler - UPS - Bus - Other:

9.20

Cool Intact

(Infitials)

deeper Samples

Page 61 of 65

ps lot 5

(575) 393-2326 FAX (575) 393-2476		
Company Name: Deberg Nod (06	BILL TO	ANALYSIS REQUEST
	P.O. #:	
Address:	Company: (24	
City: State: Zip:	o: Attn: Robert McNeil	
Phone #: Fax #:	Address:	
Project #: Project Owner:	city: midland	
ame: Envire South	State: TA Zip:	
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Project Location: Eddy (* NM	Pnone #:	
Sampler Name: Ry 5~ Reid	Fax #:	
	MATRIX PRESERV. SAMPLING	
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† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326	ax written changes to (575) 393-2326	

Laboratories

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(575) 393-2326 FAX (575) 393-2476			
Company Name: ('96)	BIL	LTO	ANALYSIS REQUESI
	P.O. #:		
	Company: (26	06	
City: State:	Zip: Attn: Pober	L Incolei	
Phone #: Fax #:	Address:		
	Project Owner: City:		
Project Name: Employ South Unit	# IS State:	Zip:	
m Full (n)	Phone #:		
Pran R	e(() Fax #:		
1 747 1	MATRIX	SAMPLING	
Lab I.D. Sample I.D.	AB OR (C)OMP. ONTAINERS OUNDWATER STEWATER - DGE IER : D/BASE: / COOL IER :	TPH PTEX Chloride	
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† Cardinal cannot accept verbal change	s. Please fax written changes to (575) 393-23	26	
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Laboratories

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Company Name: / ^	BILL TO	ANALYSIS REQUEST
Project Manager: Delfor And	P.O. #:	
	Company: (OK	
	State: Zip: Attn: Robert McAet	
IB #:	Fax #: Address:	
	Project Owner: City: Mid land	
ame: Envice Suffe L	Anit I K Zip:	
on: Eldy (o ,	Phone #:	
Run R	TFax #:	
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Lab I.D. Sample I.D.	RAB OR (C) DNTAINER DUNDWAT STEWATEF	TP4 BTE Chlo
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10 44 (2-2.5)	A A A	× × ×
PLEASE NOTE: Liability and Damages. Cardinat's liability and client's analyses. All ciaims including those for negligence and any other caus	PLEASE NOTE: Lability and Damages. Cardinal's lability and client's exclusive remedy for any claim arising whete-it based in contract or tort, shall be limited to the amount paid by the client for the PLEASE NOTE: Lability and Damages. Cardinal's lability and client's exclusive remedy for any claim arising whete-it based in contract or tort, shall be limited to the amount paid by the client for the press. All claims including those for negligence and any other cause whatsoever shall be deemed varied unless made in writing and neeked by Cardinal writing with 30 days after completion of the epplicable arabites. All claims including those for negligence and any other cause whatsoever shall be deemed varied. In writing and neeked by Cardinal writing whith 30 days after completion of the epplicable arabites. All claims including those for negligence and any other cause whatsoever shall be deemed varied. In writing and neeked by Cardinal writing whith 30 days after completion of the epplicable arabites. All claims including those for negligence and any other cause whatsoever shall be deemed varied. In writing and neeked by Cardinal writing whith 30 days after completion of the epplicable arabites. All claims including those for negligence and any other cause whatsoever shall be deemed varied unless made in writing and neeked by Cardinal writing and the epplicable arabites. All claims including those for negligence and any other cause whatsoever shall be deemed varied unless made in writing and neeked by Cardinal writing and the epplicable arabites. All claims including the exclusive and any other cause whatsoever shall be deemed varied unless made in writing and neeked by Cardinal writing and the element of the exclusive and the element of the	pplicable
Filiates or successors arising out of or related to the performance of the successors arising out of or related to the performance of the successors arising out of or related to the performance of the successors arising out of or related to the performance of the successors arising out of or related to the performance of the successors are successors arising out of or related to the performance of the successors are successors arising out of or related to the performance of the successors are success	affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claims is based upon any of the above stated reasons or otherwise. affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claims is based upon any of the above stated reasons or otherwise. affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claims is based upon any of the above stated reasons or otherwise. affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whethereunder by Car	lt: 🗆 Yes
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6204 Sd

		ANALISIS REQUEST
Direct Manager: Allal Angl	P.O. #:	
	Company: (06	
City: State:	Zip: Attn: Robert McNeil	
Phone #: Fax #:	Address:	
	eity: Myoland	
Project Name: Empire South Unit # 1	State: 42 Zip:	
Edd	Phone #:	
0.	Fax #:	
Sampler Name: Ky Gn Yexn	MATRIX PRESERV SAMPLING	
Lab I.D. Sample I.D.	LUDGE THER : CID/BASE: CE / COOL THER :	TP4 BTEX Chlonide
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PLEASE NOTE: Liability and Damages. Cardina's fability and client's exclusive remedy i analyses. All claims including those for negligence and any other cause whatsoever shall service. In no event shall Cardinal be liable for incidental or consequental damages, induc	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by thu client for the arialyses. All claims including those for negligence and any other cause whatsoever shall be deemed valved unless made in writing and received by Cardinal within 30 days after completion of the applicable area/ses. All claims including those for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of provide the tessons or otherwise.	or the the epplicable iaires, .
affiates or successors arising out of or related to the performance or services interview or contracting of the services interview of the services i	Received By: And And And And Result: Fax Result: Fax Result: REMARKS:	esult:
Relinquished By: Date: Time:	Received By:	See remarks on PS 1
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Q.22 Sample Condition Crite@Keth BY: Cool Intact Yes PYes Antitrats	
† Cardinal cannot accept verbal changes. Please fax written changes to (576) 493-2326	ase fax written changes to (575) 193-2326	

PS Sof5

Laboratories

PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



Analytical Report

Prepared for:

Thomas Franklin American Safety Services, Inc 8715 Andrews Hwy Odessa, TEXAS 79765

Project: COG-COI Empire South Unit #015 Project Number: [none] Location: Eddy Co NM

Lab Order Number: 7H23001



NELAP/TCEQ # T104704516-16-7

Report Date: 08/28/17

Project: COG-COI Empire South Unit #015 Project Number: [none] Project Manager: Thomas Franklin

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
T-1 (AH5) (3.5' EB) 0-0.5	7H23001-01	Soil	08/21/17 13:15	08-22-2017 16:30
T-1 (AH5) (3.5' EB) 0.5-1	7H23001-02	Soil	08/21/17 13:20	08-22-2017 16:30
T-1 (AH5) (3.5' EB) 1-1.5	7H23001-03	Soil	08/21/17 13:25	08-22-2017 16:30
T-1 (AH5) North Sidewall	7H23001-04	Soil	08/21/17 16:00	08-22-2017 16:30
T-1 (AH5) South Sidewall	7H23001-05	Soil	08/21/17 16:04	08-22-2017 16:30
T-1 (AH5) East Sidewall	7H23001-06	Soil	08/21/17 16:12	08-22-2017 16:30
T-1 (AH5) West Sidewall	7H23001-07	Soil	08/21/17 16:16	08-22-2017 16:30

T-1 (AH5) (3.5' EB) 0-0.5 7H23001-01 (Soil)

				-						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
Permian Basin Environmental Lab, L.P.										
General Chemistry Parameters by	EPA / Standard Methods									
Chloride	90.6	1.04	mg/kg dry	1	P7H2311	08/23/17	08/24/17	EPA 300.0		
% Moisture	7.0	0.1	%	1	P7H2403	08/24/17	08/24/17	ASTM D2216		

Permian Basin Environmental Lab, L.P.

T-1 (AH5) (3.5' EB) 0.5-1

7H23001-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
Permian Basin Environmental Lab, L.P.										
General Chemistry Parameters by EPA	/ Standard Methods									
Chloride	90.2	1.06	mg/kg dry	1	P7H2311	08/23/17	08/24/17	EPA 300.0		
% Moisture	6.0	0.1	%	1	P7H2403	08/24/17	08/24/17	ASTM D2216		

Chloride

% Moisture

1

1

P7H2311

P7H2403

08/23/17

08/24/17

08/24/17

08/24/17

EPA 300.0

ASTM D2216

T-1 (AH5) (3.5' EB) 1-1.5 7H23001-03 (Soil) Analyte Reporting Limit Dilution Batch Prepared Analyzed Method Notes Permian Basin Environmental Lab, L.P. General Chemistry Parameters by EPA / Standard Methods

1.08 mg/kg dry

%

0.1

75.8

7.0

Permian Basin Environmental Lab, L.P.

Project: COG-COI Empire South Unit #015 Project Number: [none] Project Manager: Thomas Franklin

T-1 (AH5) North Sidewall 7H23001-04 (Soil) Analyte Reporting Limit Units Dilution Batch Prepared Analyzed Method Notes Permian Basin Environmental Lab, L.P. General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.09 mg/kg dry	1	P7H2311	08/23/17	08/24/17	EPA 300.0
% Moisture	8.0	0.1 %	1	P7H2403	08/24/17	08/24/17	ASTM D2216

% Moisture

Project: COG-COI Empire South Unit #015 Project Number: [none] Project Manager: Thomas Franklin

ASTM D2216

08/24/17

	1) South Si 001-05 (So						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Permia	n Basin E	nvironme	ntal Lab, l	L.P.				
General Chemistry Paramet	ters by EPA / Standard Methods								
Chloride	ND	1.02	mg/kg dry	1	P7H2311	08/23/17	08/24/17	EPA 300.0	

%

1

P7H2403

08/24/17

0.1

2.0

Permian Basin Environmental Lab, L.P.

Project: COG-COI Empire South Unit #015 Project Number: [none] Project Manager: Thomas Franklin

T-1 (AH5) East Sidewall

7H23001-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
Permian Basin Environmental Lab, L.P.											
General Chemistry Parameters by EPA	General Chemistry Parameters by EPA / Standard Methods										
Chloride	98.6	1.02	mg/kg dry	1	P7H2311	08/23/17	08/24/17	EPA 300.0			
% Moisture	2.0	0.1	%	1	P7H2403	08/24/17	08/24/17	ASTM D2216			

% Moisture

ASTM D2216

08/24/17

	T·) West S 001-07 (Se						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Permian	Basin E	nvironme	ental Lab, I	L.P.				
General Chemistry Paramet	ters by EPA / Standard Methods								
Chloride	ND	1.02	mg/kg dry	1	P7H2311	08/23/17	08/24/17	EPA 300.0	

%

0.1

2.0

1

P7H2403

08/24/17

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P7H2311 - *** DEFAULT PREP ***										
Blank (P7H2311-BLK1)				Prepared: (08/23/17 A	nalyzed: 08	8/24/17			
Chloride	ND	1.00	mg/kg wet							
LCS (P7H2311-BS1)				Prepared: (08/23/17 A					
Chloride	410	1.00	mg/kg wet	400		102	80-120			
LCS Dup (P7H2311-BSD1)				Prepared: (08/23/17 A	nalyzed: 08	8/24/17			
Chloride	425	1.00	mg/kg wet	400		106	80-120	3.69	20	
Duplicate (P7H2311-DUP1)	Sour	ce: 7H22005	5-01	Prepared: (08/23/17 A	nalyzed: 08	8/24/17			
Chloride	787	5.05	mg/kg dry		794			0.997	20	
Duplicate (P7H2311-DUP2)	Sour	ce: 7H17001	1-07	Prepared: (Prepared: 08/23/17 Analyzed: 08/24/17					
Chloride	10000	50.5	mg/kg dry		9840			1.63	20	
Matrix Spike (P7H2311-MS1)	Sour	ce: 7H22005	5-01	Prepared: (08/23/17 A	nalyzed: 08	8/24/17			
Chloride	1860	5.05	mg/kg dry	1010	794	106	80-120			
Batch P7H2403 - *** DEFAULT PREP ***										
Blank (P7H2403-BLK1)				Prepared &	Analyzed:	08/24/17				
% Moisture	ND	0.1	%	-	-					
Duplicate (P7H2403-DUP1)	Sour	ce: 7H23001	1-07	Prepared &	Analyzed:					
% Moisture	1.0	0.1	%		2.0			66.7	20	

Notes and Definitions

BULK	Samples received in Bulk soil containers
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike

MS Matrix Spike

Duplicate Dup

un Barron

Report Approved By:

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

8/28/2017

Date:

Midland, Texas 79706 Project Name: Gr // C Employee Loc: Employe
Midland, Texas 78706 Project Name: Cols Cols Project Name: Cols<
Project Name: OF Project Name: Project Name: Project Name: Project Name: Other (Specify) Project Loc: Project Loc: Edu / Project Name: Project Project Project Project Project Project Project Proje
Project Name: Other (Specify) Project Loc: Froject Loc: Brynet Project Loc: Brite: Sage Do Correlis
Project Name: OK GW = Groundwater S=Soll/Solid Project Name: OK GW = Groundwater S=Soll/Solid Project Name: OK NP=Non-Potable Specify Other Project I.sc: Format: Standard TPH: 1 TPH: 1 TPH: 1 Cations (Ca, Mg, Na, K) 1 Cations (Ca, Mg, Na, K) 1 Cations (Ca, Mg, Na, K) 1 Sample Containers (Ca, Mg, Na, K) 1 Sample Containers (Cations (Ca, Mg, Na, K)) VOCs Free of Headspace? VOCs Semivolatiles 1 Semivolatiles 1 N.O.R.M. 1 N.O.R.M. 1 N.O.R.M. 1 N.O.R.M.
aboratory Comments: Anions (Ca, Mg, Na, K) TCLP. aboratory Comments: SAR / ESP / CEC aboratory Comments: Metals: As Ag Ba Cd Cr Pb Hg Se aboratory Comments: Semivolatiles aboratory Comments: BTEX 8021B/5030 or BTEX 8260 Analyze For: RCI Analyze For: N.O.R.M.
BODDO HARRA F & Chloride 300.0
BOOR HAARAA Chloride 300.0



APPENDIX D

Initial and Final C-141

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

API No. 30-015-22236

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. 432-230-0077		
Facility Name: COI EMPIRE SOUTH UNIT #015	Facility Type: Battery		

LOCATION OF RELEASE

Mineral Owner: Federal

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
Е	08	18S	29E	1980	North	660	West	Eddy

Latitude 32.7637024 Longitude -104.103363

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 90 bbls	Volume Re	ecovered:					
Source of Release:	Date and Hour of Occurrence:	0 0 0 - 0	Iour of Discovery:					
Lightning	8/29/2016 unknown	8/29/2016						
Was Immediate Notice Given?	If YES, To Whom?	0/2//2010						
Yes No Not Required	· · · · · · · · · · · · · · · · · · ·	nelly Tucker/H	BLM					
By Whom? Dakota Neel	Date and Hour: 8/30/2016 12:48 p.m.							
Was a Watercourse Reached?	If YES, Volume Impacting the Wa	tercourse.						
🗌 Yes 🖾 No								
If a Watercourse was Impacted, Describe Fully.*								
Describe Cause of Problem and Remedial Action Taken.*								
This release was caused when lightning struck the facility. The facility w	vas a total loss.							
Describe Area Affected and Cleanup Action Taken.*								
The release impacted both the location and the pasture immediately surro								
recoverable. Concho will have the spill site sampled to delineate any pos	ssible contamination from the release a	and we will pr	esent a remediation work plan					
to the NMOCD for approval prior to any significant remediation work.								
I hereby certify that the information given above is true and complete to	the best of my knowledge and underst	and that nursu	ant to NMOCD rules and					
regulations all operators are required to report and/or file certain release r								
public health or the environment. The acceptance of a C-141 report by the								
should their operations have failed to adequately investigate and remedia								
or the environment. In addition, NMOCD acceptance of a C-141 report of								
federal, state, or local laws and/or regulations.	x x	2	1 5					
	OIL CONSER	VATION I	DIVISION					
Signature: De abox Rey								
Signature:								
Printed Name: Dakota Neel	Approved by Environmental Specialist:							
Title: Environmental Coordinator	Approval Date: Expiration Date:							
E-mail Address: dneel2@concho.com	Conditions of Approval:							
	Conditions of Approval.		Attached					
Date: September 16, 2016 Phone: 575-748-6933								

* Attach Additional Sheets If Necessary

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**

NM OIL CONSERVATION ARTESIA DISTRICT

SEP 16 2016

Form C-141 Revised August 8, 2011

Submit 1 Copy to appropriate District Office in **RECEIVED** ance with 19.15.29 NMAC.

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

Release Notification and Corrective Action													
DABI	4263	35143	35		-	OPERATOR 🛛 Initial Report 🗌 Final Report							
Name of Co	mpany: C	OG Operatio	ng LLC	229137		Contact: Robert McNeill							
		nois Avenue MPIRE SOU				Telephone No. 432-230-0077 Facility Type: Battery							
Surface Ow	ner: Privat	e		Mineral O	wner:	Federal			PI No. 30-015-	22236			
				LOCA		N OF REI	LEASE				<u>.</u>		
Unit Letter E	Section 08	Township 18S	Range 29E	Feet from the 1980		/South Line North	Feet from the 660	East/West I West	Line	County Eddy			
L		105	270	· · · · · · · · · ·				west	1	Dudy			
						OF RELI	e -104.103363 EASE						
Type of Rele	ase: Oil					Volume of			ume Recovered:				
Source of Re	lease					90 bbls	lour of Occurrenc	0 bb	ols e and Hour of Di	iscovery.			
Lightning	icase.					8/29/2016	unknown		2016 8:00 a.m.				
Was Immedi	ate Notice C] No 📋 Not Re	awired	If YES, To Heather Pa	Whom? tterson/NMOCD	and Shelly T	ucker/BI M				
By Whom?	Dakota Ne				quica		lour: 8/30/2016 1						
Was a Water		hed?		· · · · · ·			olume Impacting t		rse.				
			Yes 🛛	No									
If a Watercon	urse was Im	pacted, Descri	be Fully.	•									
Describe Cau	use of Proble	em and Remed	lial Actio	n Taken.*			-						
This release	was caused	when lightnir	ig struck (he facility. The fa	cility w	vas a total loss							
		and Cleanup A		en.* asture immediatel	v surro	unding the fac	vility Oil released	during the ir	ncident was hurr	ed and non	-		
				pled to delineate a									
to the NMOO	CD for appro	oval prior to a	ny signifi	cant remediation v	vork.								
				is true and compl nd/or file certain re									
public health	or the envir	onment. The	acceptan	ce of a C-141 repo	rt by th	e NMOCD m	arked as "Final R	eport" does n	ot relieve the op	erator of lia	ability		
				investigate and re stance of a C-141									
		vs and/or regu					-		-				
	•	·	_				<u>OIL CON</u>	SERVAT	<u>ION DIVISI</u>	<u>ON</u>			
Signature:		Sahor	- ^	-			Simed	By M	14 Berer	1. 200			
Printed Name: Dakota Neel Approved by Environmental Specialist:								<u> </u>	-				
							aliali		N	IX			
Title: Enviro	nmental Co	ordinator				Approval Dat		O Expir	ation Date: N	<i>r\</i>			
E-mail Addr	ess: dneel2@	@concho.com				Conditions of	f Approval:		Attache	a 🗖			
Date: Senta	mber 16 - 20	16	Dho	ne: 575-748-6933		Remediati	on per O.C.D EMEDIATION	Rules &	Guidelines"	~ 🗆			
Date: Septer * Attach Addi				10. 3/3-140-0733		LATER TH		101110		000	TQ GAN		
			•				~~ =~			2RP	-2044		



APPENDIX E

Waste Manifest

Control Contro Control Control Control Control Control Control Control Control Co	n soy		NEW MEXIC	CO NON-HAZARDOUS (PLEASE F		MANIFEST Company Man Cont: Name	act Informatio
	SOLUTIONS					Phone No. 162 215	1183
				GENER/	ATOR	NO. 252548	-
Species Inter and the set of the	Operator No.	Auto		and the second		13. 1 + 1 - C	
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Sing States, Park Pile Name & No. Sing States, Park Pile Name & No. CECHATEER PW States/Service Identification and Amount (blice wolume most to wrate type in barrels or cubic yards) Di Sarda Carring: Pile Addition (Control Control Contr	Address			Contraction and the second	County		
<form> memb APPO 00 Constructure Constructure Constructure</form>				and manher the first	API No.	<u>Lady 2-015-727</u>	50
EXEMPT E&P. Waste/Service Identification and Amount (place volume next to waste type in barrels or clube, variet) OF sets them: Waster State (Marking) OF sets them: Waster State (Marking) Versite State (Marking) Produces Waster (Non-Inpectable) Produces Waster (Non-Inpectable) Produces Waster (Non-Inpectable) Produces Waster (Non-Inpectable) Completer (Non-Inpectable) Produces Waster (Non-Inpectable) Completer (Non-Inpectable) Completer (Non-Inpectable) Completer (Non-Inpectable) Completer (Non-Inpectable) Completer (Non-Inpectable) Completer (Non-Inpectable) Completer (Non-Inpectable) Completer (Non-Inpectable) Completer (Non-Inpectable) MARTE GENERATION PROCESS: DBILLING Non-Inpectable Non-Inpectable) Marter (Non-Inpectable) Non-Inpectable	City, State, Zip			offeriore, pr actice the	The second second second second second	NER-APP	
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Interby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste easis (Incels the appropriate classification) Image: Construction of the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection operations and are not mixed with non-exempt waste (R360 Accepts certifications on a period basis only) Image: Construction of the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection operations and are not mixed with non-exempt waste (R360 Accepts certifications on a period basis on the Act (RecRA) regulation, 40 CC 251,21-251,221, 221, 221, 221, 221, 221, 221, 2							
and is (Check the appropriate chars/facture) REAL EXEMPT REAL EXEMPT REAL ADDI-SEERIPT REAL ADDI-SEER						State and a state of the state	
CRA DEXEMT: Oli field sustes penetates from oil and gas exploration and production operations and are not mixed with non-exempt waste (R360 Accepts certifications on a period basis only) RCRA NON-EXEMT: Oli field sustes which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CE ZE1.232.123.4, or listel hazardous waste as defined by 40 CFR, part 26, subpart 0, as amended. The following documentation demonstrating the waste as non- ZE1.232.123.4, or listel hazardous waste as defined by 40 CFR, part 26, subpart 0, as amended. The following documentation demonstrating the waste as non- ZE1.232.123.4, or listel hazardous waste as defined by 40 CFR, part 26, subpart 0, as amended. The following documentation demonstrating the waste as non- ZE1.232.123.4, or listel hazardous waste as defined by 40 CFR, part 26, subpart 0, as amended. The following documentation of non-hazardous waste determination and a description of the waste must accompany this form when Non- when N			rvation and Recovery A	ct (RCRA) and the US Envir	ronmental Protection Ap	gency's July 1988 regulatory determination, the above des	cribed waste
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Itransporter's Name Driver's Name Address Print Name Phone No. Truck No. It neeby certify that the above named material (s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below. It neeby certify that the above named material has been (circle one): DIVER'S SIGNATURE DIVER'S SIGNATURE DIVER'S SIGNATURE DIVER'S SIGNATURE DIVER'S SIGNATURE DIVER'S SIGNATURE DIVER'S SIGNATURE Nome / NO. STS-393-1079 Address Mathway Facility / NM1-006 Permit No. STS-393-1079 Address NOM READINGS TAKEN? (Circle One) VES NO PASS THE PAINT FILTER TEST? (Circle One) VES Feet Inches Ist Gauge BS&W/BBLS Received Charles BS&W/BBLS Received It hereby certify that the above load material has been (circle one): ACCEPTED DENED If denied, why?		determination a	nd a desciption of the w	vaste must accompany this	, torm)		
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I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below. SHIPMENT DATE DRIVER'S SIGNATURE TRUCK TIME STAMP DISPOSAL FACILITY RECEIVING AREA IN: OUT: Name/No. Stick Name/ Phone No. 575-393-1079 G601 Hobbs Hwy US 62/180 Mile Marker 66 Carlsbad, NM 88220 NORM READINGS TAKEN? (Circle One) YES NO NORM READINGS TAKEN? (Circle One) YES NO If YES, was reading > 50 micro roentgens? (circle one) YES NO St Gauge Feet Inches BS&W/BBLS Received BS&W/ (%) BS&W/ (%) BS&W/ (%) Ist Gauge Feet Inches BS&W/ (%) Free Water Total Received I hereby certify that the above load material has been (circle one): ACCEPTED DENED If denied, why?					Phone No.		
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IN: OUT: Name/No. Site Name/ Permit No. Halfway Facility / NM1-006 Phone No. 575-393-1079 Address 6601 Hobbs Hwy US 62/180 Mile Marker 66 Carlsbad, NM 88220 Phone No. 575-393-1079 NORM READINGS TAKEN? (Circle One) YES NO If YES, was reading > 50 micro roentgens? (circle one) YES NO PASS THE PAINT FILTER TEST? (Circle One) YES NO NO NO NO Feet Inches BS&W/BBLS Received BS&W (%) Pree Water Cotal Gauge Free Water Total Received BS&W (%) Image: Circle One) I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why? Image: Circle One)	SHIPM		States and the second sec		CONTRACTOR OF THE OWNER OF THE OWNER OF		A CONTRACTOR OF THE OWNER
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Ist Gauge BS&W/BBLS Received BS&W (%) 2nd Gauge Free Water Total Received Received Total Received Total Received	N				NO	ing > 50 micro roentgens? (circle one) YES	NO
Received Total Received I hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?	N	THE PAINT FILTER TEST? (Circle One	e) YES	TANK BO	NO	ing > 50 micro roentgens? (circle one) YES	NO
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NUNCT 20117 WURSt. JNUNAS	N PASS 1st Gauge 2nd Gauge	THE PAINT FILTER TEST? (Circle One	e) YES	TANK BO	NO TTOMS	&W/BBLS Received BS&W (%) Free Water	NO
NUNCT 20117 WURSt. JNUNAS	N PASS 1st Gauge	THE PAINT FILTER TEST? (Circle One	e) YES	TANK BO	NO TTOMS	&W/BBLS Received BS&W (%) Free Water	NO
	N PASS 1st Gauge 2nd Gauge Received	THE PAINT FILTER TEST? (Circle One Feet	e) YES	TANK BO	NO TTOMS BS	&W/BBLS Received BS&W (%) Free Water Total Received	NO
	N PASS 1st Gauge 2nd Gauge Received	THE PAINT FILTER TEST? (Circle One Feet	e) YES	TANK BO	NO TTOMS BS	&W/BBLS Received BS&W (%) Free Water Total Received	NO
	N PASS st Gauge nd Gauge leceived	THE PAINT FILTER TEST? (Circle One Feet	e) YES	TANK BO	NO TTOMS BS	&W/BBLS Received BS&W (%) Free Water Total Received	NO

R360	AFE #: PO #:	DAKOTA NEE		Ticket #: Bid #: Date: Generator: Generator #	•		с
ENVIRONMENTAL SOLUTIONS	Manifest #: Manif. Date:	NA 8/22/2017		Well Ser. #: Well Name:	22236 COI EMPIRE	E SOUTH	UNIT
Permian Basin	Hauler: Driver Truck #	APSI RUBEN 1130		Well #: Field: Field #:	.015		
	Card # Job Ref #			Rig: County	NON-DRILLI EDDY (NM)	NG	
Facility: CRI							
Product / Service			Qua	ntity Units			
Contaminated Soil (RCRA Exem	npt)			20.00 yards			
Cell pH	CI Cor	nd. %Solids	TDS F	PCI/GM MR/HR	H2S	% Oil \	Weight

0.00

0.00

0.00

Lab Analysis: 50

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

0

 \underline{X} RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

____ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

_ MSDS Information _	RCRA Hazardous Waste Analysis	S _ Process Knowledge	Other (Provide description above)	
Driver/ Agent Signature		R360 Representative S	Signature /	
				V

Customer Approval		1
r	HIS IS NOT AN INVOICE!	1
Approved By:	Date:	

Sector Se								
R360	Customer: Customer #: Ordered by: AFE #: PO #:	COG OPERAT CRI2120 DAKOTA NEE		Ticket #: Bid #: Date: Generator: Generator #:	700-82931 O6UJ9A00 8/24/2017 COG OPE	092L	LC	
ENVIRONMENTAL SOLUTIONS	Manifest #: Manif. Date:	NA 8/24/2017		Well Ser. #: Well Name:	22236			
Permian Basin	Hauler: Driver Truck #	APSI ABEL 1130			·015			
	Card # Job Ref #			Rig: County	NON-DRIL EDDY (NN			
Facility: CRI								
Product / Service			Quan	tity Units				
Contaminated Soil (RCRA Exe	empt)		2	20.00 yards				
Cell pH	Cl Cor	nd. %Solids	TDS P	CI/GM MR/HR	H2S	% Oil	Weight	

0.00

0.00

0.00

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Lab Analysis:

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

_____RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items): MSDS Information RCRA Hazardous Waste Analysis Process Knowledge Other (Provide description above)

Driver/ Agent Signature	R360 Representative Signature	
Customer Approval	THIS IS NOT AN INVOICE!	$\overline{\mathbb{A}}$
Approved By:	Date:	//

R3	6	3	Customer: Customer #: Ordered by: AFE #: PO #:	CRI2		IG LLC		Ticket #: Bid #: Date: Generator: Generator #:	700-82938 O6UJ9A00 8/24/2017 COG OPE	092L	LC
ENVIRONMENTAL SOLUTIONS	6		Manifest #: Manif. Date:		2017			Well Ser. #: Well Name:	COI EMPII	RE SOUT	H UNIT
Permian Basin			Hauler: Driver Truck #	APSI ABEL 1130				Well #: Field: Field #:	-015		
			Card # Job Ref #					Rig: County	NON-DRIL EDDY (NM		
Facility: CRI											
Product / Service	9					Qu	antity U	nits			
Contaminated So	oil (RC	RA Exempt	t)				20.00	yards			
С	ell	pН	CI Cor	nd. %	6Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight

0.00

0.00

50

Lab Analysis:

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

0

0.00

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, par 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items): **MSDS** Information RCRA Hazardous Waste Analysis Process Knowledge Other (Provide description above)

Driver/ Agent Signature	R360 Representative Signature	
Customer Approval		$-\chi$
	THIS IS NOT AN INVOICE!	
Approved By:	Date [.]	

RB3600 ENVIRONMENTAL SOLUTIONS Permian Basin	Customer: Customer #: Ordered by: AFE #: PO #: Manifest #: Manif. Date: Hauler: Driver Truck # Card # Job Ref #	DAKOTA NEA			Ticket #: Bid #: Date: Generator: Generator #: Well Ser. #: Well Name: Well %: Field: Field #: Rig: County	22236	092L RATING L RE SOUT	
Facility: CRI Product / Service Contaminated Soil (RCRA Exem	pt)			antity U 20.00	I nits yards			
Cell pH	CI Con	nd. %Solids	TDS	PCI/GN	1 MR/HR	H2S	% Oil	Weight

0.00

0.00

0.00

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste.

_____RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

MSDS Information	RCRA Hazardous	waste Analysis	_ Process Knowledge	_ Other (Provide description above)
Driver/ Agent Signature			R360 Representative S	Signature

0

Customer Approval	ner Approval
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Lab Analysis: 50/51

THIS IS NOT AN INVOICE!

Approved By:

Date: