



REVIEWED

By Kellie Jones at 1:42 pm, Jan 19, 2016

Dakota Neel
Environmental Coordinator

January 18, 2016

Oil Conservation Division
District 1 – Hobbs
1625 N. French Drive
Hobbs, New Mexico 88240

APPROVED

Conditional

By Kellie Jones at 1:42 pm, Jan 19, 2016

Re: Stratojet 31 State Com #6H
30-025-42452
Sec. 31, T20S-R35E
Lea County, NM

1. The plan is approved with the condition that Concho waits thirty days after the last application of Microblaze to obtain sample.
2. Ensure that the State Land Office approves/concurs.

Ms. Kellie Jones,

COG Operating LLC would like to submit for your consideration the enclosed work plan for the above captioned well. The request is in response to the C-141 Initial report dated August 8, 2015.

Background

This release was caused when a dump valve failed and oil was sent to the flare resulting in the release of 20 bbls of oil where 1 bbls was recovered. This release caused a spray that impacted approximately 1.12 acres of pasture on the northwest side of the location. Vacuum trucks were dispatched immediately to recover all standing fluid and soapy water and Microblaze were applied to the impacted soil and vegetation. The attached site diagram depicts the approximate area impacted by the release along with the approximate sampling points.

Groundwater

Based on the Chevron-Texaco Trend Maps, the release area would be classified at a site ranking of **10** with an average depth to groundwater of 87 feet.

Soil Assessment and Analytical Results

Initial soil samples were taken on 11-02-2015 with approximate sample locations depicted on the attached Site Diagram. Sample points were chosen based on safe proximity to existing gas lines. Samples indicated TPH and BTEX were within RRALs in all samples except for the surface samples taken at S1 and S2. Below is a summary of the attached analytical results:

CORPORATE ADDRESS

One Concho Center | 600 West Illinois Avenue | Midland, Texas 79701
PHONE 432.683.7443 | FAX 432.683.7441

LOCAL ADDRESS

Concho West | 2208 Main Street | Artesia, New Mexico 88210
PHONE 575.748.6940 | FAX 575.746.2096

S1	BTEX	GRO	DRO	TPH	Cl-
Surface	< 0.300	< 50.0	12500	12500	128
1'	< 0.300	< 10.0	13.1	13.1	< 16.0
2'	< 0.300	< 10.0	12.4	12.4	< 16.0
3'	< 0.300	< 10.0	10	10	< 16.0
S2	BTEX	GRO	DRO	TPH	Cl-
Surface	< 0.300	< 50.0	2510	2510	< 16.0
1'	< 0.300	< 10.0	38.9	38.9	< 16.0
2'	< 0.300	< 10.0	159	159	< 16.0
S3	BTEX	GRO	DRO	TPH	Cl-
Surface	< 0.300	< 10.0	341	341	< 16.0
1'	< 0.300	< 10.0	10.1	10.1	< 16.0
2'	< 0.300	< 10.0	< 10.0	< 10.0	< 16.0
S4	BTEX	GRO	DRO	TPH	Cl-
Surface	< 0.300	< 10.0	145	145	< 16.0
1'	< 0.300	< 10.0	< 10.0	< 10.0	< 16.0
S5	BTEX	GRO	DRO	TPH	Cl-
Surface	< 0.300	< 10.0	95.3	95.3	< 16.0
1'	< 0.300	< 10.0	< 10.0	< 10.0	< 16.0
S6	BTEX	GRO	DRO	TPH	Cl-
Surface	< 0.300	< 10.0	35.5	35.5	< 16.0
1'	< 0.300	< 10.0	< 10.0	< 10.0	< 16.0

Work Plan

COG Operating LLC proposes the following work plan based on delineation samples:

- **S1 & S2:** Surface tillage with no excavation followed by an application of Microblaze. Area is ~10,000 sq ft. and is depicted by the red shaded area in the site diagram.
- **S3 – S6:** No excavation or further work required based on the attached analytical data. Area depicted by the blue shaded area in the site diagram.

If there are no objections or further stipulations, COG Operating LLC would like to begin the remediation process based on approval of this work plan. Please feel free to contact me with any questions or concerns at (575) 689-3100.

Sincerely,



Dakota Neel
Environmental Coordinator

Enclosure(s): (1) Site Diagram
(2) C-141 Initial (Copy)
(3) Analytical Results

August 8, 2015

Stratojet 31 State Com #6H

API #30-025-42452

32.52328667, -103.48428778

Released: 20 bbls oil

Recovered: 1 bbls oil

Legend

Microblaze

Tillage + Microblaze



Site Ranking: 10

Depth to GW per SEO: 87ft

S1	BTEX	GRO	DRO	TPH	CI-
Surface	< 0.300	< 50.0	12500	12500	128
1'	< 0.300	< 10.0	13.1	13.1	< 16.0
2'	< 0.300	< 10.0	12.4	12.4	< 16.0
3'	< 0.300	< 10.0	10	10	< 16.0
S2	BTEX	GRO	DRO	TPH	CI-
Surface	< 0.300	< 50.0	2510	2510	< 16.0
1'	< 0.300	< 10.0	38.9	38.9	< 16.0
2'	< 0.300	< 10.0	159	159	< 16.0
S3	BTEX	GRO	DRO	TPH	CI-
Surface	< 0.300	< 10.0	341	341	< 16.0
1'	< 0.300	< 10.0	10.1	10.1	< 16.0
2'	< 0.300	< 10.0	< 10.0	< 10.0	< 16.0
S4	BTEX	GRO	DRO	TPH	CI-
Surface	< 0.300	< 10.0	145	145	< 16.0
1'	< 0.300	< 10.0	< 10.0	< 10.0	< 16.0
S5	BTEX	GRO	DRO	TPH	CI-
Surface	< 0.300	< 10.0	95.3	95.3	< 16.0
1'	< 0.300	< 10.0	< 10.0	< 10.0	< 16.0
S6	BTEX	GRO	DRO	TPH	CI-
Surface	< 0.300	< 10.0	35.5	35.5	< 16.0
1'	< 0.300	< 10.0	< 10.0	< 10.0	< 16.0

Google earth

500 ft



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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: COG Operating LLC	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-230-0077
Facility Name: Stratojet 31 State Com #6H	Facility Type: Battery

Surface Owner: State	Mineral Owner:	API No. 30-025-42452
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LOCATION OF RELEASE

Unit Letter O	Section 31	Township 20S	Range 35E	Feet from the 390'	North/South Line South	Feet from the 2080'	East/West Line East	County Lea
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Latitude 32.52328667 Longitude -103.49428778

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 20 bbls Oil	Volume Recovered: 1 bbl Oil
Source of Release: Dump valve	Date and Hour of Occurrence: 8/8/2015 8:00 am	Date and Hour of Discovery: 8/8/2015 8:00 am
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*


Describe Cause of Problem and Remedial Action Taken.*

This release was caused when a dump valve failed and oil was sent to the flare. Crews were dispatched immediately to apply soapy water and Microblaze.

Describe Area Affected and Cleanup Action Taken.*

This release impacted the nearby pasture with a mist in an area approximately 300 x 900'. Concho will have the spill site sampled to delineate any possible contamination from the release and we will present 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 understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	OIL CONSERVATION DIVISION		
Printed Name: Amanda Trujillo	Approved by Environmental Specialist:		
Title: Senior Environmental Coordinator	Approval Date:	Expiration Date:	
E-mail Address: atrujillo@concho.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: August 22, 2015 Phone: 575-748-6940			

* Attach Additional Sheets If Necessary



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

November 09, 2015

DAKOTA NEEL

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: STRATOJET 31 ST COM 6H BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 11/04/15 12:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Caley D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

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

Received:	11/04/2015	Sampling Date:	11/02/2015
Reported:	11/09/2015	Sampling Type:	Soil
Project Name:	STRATOJET 31 ST COM 6H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	NOT GIVEN		

Sample ID: S1- SURFACE (H502920-01)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/07/2015	ND	2.01	101	2.00	1.02		
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	1.50		
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	103	2.00	1.93		
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	1.81		
Total BTEX	<0.300	0.300	11/07/2015	ND						

Surrogate 4-Bromofluorobenzene (PIC) 98.1 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	11/05/2015	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	11/05/2015	ND	207	103	200	0.927	
DRO >C10-C28	12500	50.0	11/05/2015	ND	211	105	200	0.0565	

Surrogate 1-Chlorooctane 90.8 % 35-147

Surrogate 1-Chlorooctadecane 439 % 28-171

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

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

Received: 11/04/2015
Reported: 11/09/2015
Project Name: STRATOJET 31 ST COM 6H BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/02/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S1- 1' (H502920-02)

BTEX 80218		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/07/2015	ND	2.01	101	2.00	1.02		
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	1.50		
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	103	2.00	1.93		
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	1.81		
Total BTEX	<0.300	0.300	11/07/2015	ND						

Surrogate 4-Bromofluorobenzene (PIE) 99.2 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/05/2015	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	11/05/2015	ND	207	103	200	0.927		
DRO >C10-C28	13.1	10.0	11/05/2015	ND	211	105	200	0.0565		

Surrogate 1-Chlorooctane 92.7 % 35-147

Surrogate 1-Chlorooctadecane 103 % 28-171

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 11/04/2015
Reported: 11/09/2015
Project Name: STRATOJET 31 ST COM 6H BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/02/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S1- 2' (H502920-03)

BTEX 80218			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/07/2015	ND	2.01	100	2.00	0.639		
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	0.639		
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	102	2.00	0.423		
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	0.558		
Total BTEX	<0.300	0.300	11/07/2015	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 102 % 73.6-140

Chloride, SM4500Cl-8			mg/kg							
			Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/05/2015	ND	416	104	400	0.00		

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	11/05/2015	ND	207	103	200	0.927		
DRO >C10-C28	12.4	10.0	11/05/2015	ND	211	105	200	0.0565		

Surrogate: 1-Chlorooctane 89.5 % 35-147

Surrogate: 1-Chlorooctadecane 100 % 28-171

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 11/04/2015
 Reported: 11/09/2015
 Project Name: STRATOJET 31 ST COM 6H BATTERY
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/02/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Judy Garcia

Sample ID: S1- 3' (H502920-04)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/07/2015	ND	2.01	100	2.00	0.639	
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	0.639	
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	102	2.00	0.423	
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	0.558	
Total BTEX	<0.300	0.300	11/07/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.9 % 73.6-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/05/2015	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/05/2015	ND	207	103	200	0.927	
DRO >C10-C28	10.0	10.0	11/05/2015	ND	211	105	200	0.0565	

Surrogate: 1-Chlorooctane 87.4 % 35-147

Surrogate: 1-Chlorooctadecane 97.1 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	11/04/2015	Sampling Date:	11/02/2015
Reported:	11/09/2015	Sampling Type:	Soil
Project Name:	STRATOJET 31 ST COM 6H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	NOT GIVEN		

Sample ID: S2- SURFACE (H502920-05)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/06/2015	ND	2.04	102	2.00	0.445		
Toluene*	<0.050	0.050	11/06/2015	ND	2.28	114	2.00	0.920		
Ethylbenzene*	<0.050	0.050	11/06/2015	ND	2.10	105	2.00	1.13		
Total Xylenes*	<0.150	0.150	11/06/2015	ND	6.68	111	6.00	1.03		
Total BTEX	<0.300	0.300	11/06/2015	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 100 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/06/2015	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	11/06/2015	ND	207	103	200	0.927	
DRO >C10-C28	2510	50.0	11/06/2015	ND	211	105	200	0.0565	

Surrogate: 1-Chlorooctane 96.2 % 35-147

Surrogate: 1-Chlorooctadecane 175 % 28-171

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	11/04/2015	Sampling Date:	11/02/2015
Reported:	11/09/2015	Sampling Type:	Soil
Project Name:	STRATOJET 31 ST COM 6H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	NOT GIVEN		

Sample ID: S2- 1' (H502920-06)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/07/2015	ND	2.01	100	2.00	0.639	
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	0.639	
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	102	2.00	0.423	
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	0.558	
Total BTEX	<0.300	0.300	11/07/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 102 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/06/2015	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2015	ND	207	103	200	0.927	
DRO >C10-C28	38.9	10.0	11/06/2015	ND	211	105	200	0.0565	

Surrogate: 1-Chlorooctane 95.1 % 35-147

Surrogate: 1-Chlorooctadecane 105 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	11/04/2015	Sampling Date:	11/02/2015
Reported:	11/09/2015	Sampling Type:	Soil
Project Name:	STRATOJET 31 ST COM 6H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	NOT GIVEN		

Sample ID: S2- 2' (H502920-07)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/07/2015	ND	2.01	100	2.00	0.639		
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	0.639		
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	102	2.00	0.423		
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	0.558		
Total BTEX	<0.300	0.300	11/07/2015	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/06/2015	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	11/06/2015	ND	207	103	200	0.927		
DRO >C10-C28	159	10.0	11/06/2015	ND	211	105	200	0.0565		

Surrogate: 1-Chlorooctane 94.6 % 35-147

Surrogate: 1-Chlorooctadecane 106 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 11/04/2015
Reported: 11/09/2015
Project Name: STRATOJET 31 ST COM 6H BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/02/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S3- SURFACE (H502920-08)

BTEX 8021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/07/2015	ND	2.01	100	2.00	0.639	
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	0.639	
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	102	2.00	0.423	
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	0.558	
Total BTEX	<0.300	0.300	11/07/2015	ND					

Surrogate 4-Bromofluorobenzene (PIC) 101 % 73 6-140

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/06/2015	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2015	ND	207	103	200	2.82	
DRO >C10-C28	341	10.0	11/06/2015	ND	212	106	200	3.38	

Surrogate 1-Chlorooctane 94.1 % 35-147

Surrogate 1-Chlorooctadecane 109 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	11/04/2015	Sampling Date:	11/02/2015
Reported:	11/09/2015	Sampling Type:	Soil
Project Name:	STRATOJET 31 ST COM 6H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	NOT GIVEN		

Sample ID: S3- 1' (H502920-09)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/07/2015	ND	2.01	100	2.00	0.639	
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	0.639	
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	102	2.00	0.423	
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	0.558	
Total BTEX	<0.300	0.300	11/07/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 98.6 % 73 6-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/06/2015	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2015	ND	207	103	200	2.82	
DRO >C10-C28	10.1	10.0	11/06/2015	ND	212	106	200	3.38	

Surrogate: 1-Chlorooctane 94.4 % 35-147

Surrogate: 1-Chlorooctadecane 103 % 28-171

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Analytical Results For:

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

Received: 11/04/2015
Reported: 11/09/2015
Project Name: STRATOJET 31 ST COM 6H BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/02/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S3- 2' (H502920-10)
BTEX 8021B

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/07/2015	ND	2.01	100	2.00	0.639	
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	0.639	
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	102	2.00	0.423	
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	0.558	
Total BTEX	<0.300	0.300	11/07/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 97.1 % 73.6-140

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/06/2015	ND	400	100	400	0.00	

TPH 8015M

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2015	ND	207	103	200	2.82	
DRO >C10-C28	<10.0	10.0	11/06/2015	ND	212	106	200	3.38	

Surrogate: 1-Chlorooctane 92.4 % 35-147

Surrogate: 1-Chlorooctadecane 99.4 % 28-171

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Analytical Results For:

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

Received:	11/04/2015	Sampling Date:	11/02/2015
Reported:	11/09/2015	Sampling Type:	Soil
Project Name:	STRATOJET 31 ST COM 6H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	NOT GIVEN		

Sample ID: S4- SURFACE (H502920-11)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/07/2015	ND	2.01	100	2.00	0.639	
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	0.639	
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	102	2.00	0.423	
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	0.558	
Total BTEX	<0.300	0.300	11/07/2015	ND					

Surrogate 4-Bromofluorobenzene (PIC) 101 % 73 6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/06/2015	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2015	ND	207	103	200	2.82	
DRO >C10-C28	145	10.0	11/06/2015	ND	212	106	200	3.38	

Surrogate 1-Chlorooctane 94.7 % 35-147

Surrogate 1-Chlorooctadecane 109 % 28-171

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Caley D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	11/04/2015	Sampling Date:	11/02/2015
Reported:	11/09/2015	Sampling Type:	Soil
Project Name:	STRATOJET 31 ST COM 6H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	NOT GIVEN		

Sample ID: S4- 1' (H502920-12)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/07/2015	ND	2.01	100	2.00	0.639	
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	0.639	
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	102	2.00	0.423	
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	0.558	
Total BTEX	<0.300	0.300	11/07/2015	ND					

Surrogate 4-Bromofluorobenzene (PIC) 100 % 73 6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/06/2015	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2015	ND	207	103	200	2.82	
DRO >C10-C28	<10.0	10.0	11/06/2015	ND	212	106	200	3.38	

Surrogate 1-Chlorooctane 92.8 % 35-147

Surrogate 1-Chlorooctadecane 102 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	11/04/2015	Sampling Date:	11/02/2015
Reported:	11/09/2015	Sampling Type:	Soil
Project Name:	STRATOJET 31 ST COM 6H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	NOT GIVEN		

Sample ID: S5- SURFACE (H502920-13)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/07/2015	ND	2.01	100	2.00	0.639		
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	0.639		
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	102	2.00	0.423		
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	0.558		
Total BTEX	<0.300	0.300	11/07/2015	ND						

Surrogate 4-Bromofluorobenzene (PIE) 96.7 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/06/2015	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	11/06/2015	ND	207	103	200	2.82		
DRO >C10-C28	95.3	10.0	11/06/2015	ND	212	106	200	3.38		

Surrogate 1-Chlorooctane 93.1 % 35-147

Surrogate 1-Chlorooctadecane 103 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	11/04/2015	Sampling Date:	11/02/2015
Reported:	11/09/2015	Sampling Type:	Soil
Project Name:	STRATOJET 31 ST COM 6H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	NOT GIVEN		

Sample ID: S5- 1' (H502920-14)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/07/2015	ND	2.01	100	2.00	0.639	
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	0.639	
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	102	2.00	0.423	
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	0.558	
Total BTEX	<0.300	0.300	11/07/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 99.0 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/06/2015	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2015	ND	207	103	200	2.82	
DRO >C10-C28	<10.0	10.0	11/06/2015	ND	212	106	200	3.38	

Surrogate: 1-Chlorooctane 93.2 % 35-147

Surrogate: 1-Chlorooctadecane 102 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	11/04/2015	Sampling Date:	11/02/2015
Reported:	11/09/2015	Sampling Type:	Soil
Project Name:	STRATOJET 31 ST COM 6H BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	NOT GIVEN		

Sample ID: S6- SURFACE (H502920-15)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/07/2015	ND	2.01	100	2.00	0.639	
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	0.639	
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	102	2.00	0.423	
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	0.558	
Total BTEX	<0.300	0.300	11/07/2015	ND					

Surrogate 4-Bromofluorobenzene (PIE) 102 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/06/2015	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2015	ND	207	103	200	2.82	
DRO >C10-C28	35.5	10.0	11/06/2015	ND	212	106	200	3.38	

Surrogate 1-Chlorooctane 95.8 % 35-147

Surrogate 1-Chlorooctadecane 107 % 28-171

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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 11/04/2015
Reported: 11/09/2015
Project Name: STRATOJET 31 ST COM 6H BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/02/2015
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Judy Garcia

Sample ID: S6- 1' (H502920-16)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/07/2015	ND	2.01	100	2.00	0.639	
Toluene*	<0.050	0.050	11/07/2015	ND	2.24	112	2.00	0.639	
Ethylbenzene*	<0.050	0.050	11/07/2015	ND	2.05	102	2.00	0.423	
Total Xylenes*	<0.150	0.150	11/07/2015	ND	6.52	109	6.00	0.558	
Total BTEX	<0.300	0.300	11/07/2015	ND					

Surrogate 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/06/2015	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/06/2015	ND	207	103	200	2.82	
DRO >C10-C28	<10.0	10.0	11/06/2015	ND	212	106	200	3.38	

Surrogate 1-Chlorooctane 85.5 % 35-147

Surrogate 1-Chlorooctadecane 93.8 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
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 SM4500C-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 2

BILL TO

ANALYSIS REQUEST

Company Name: COG Operating LLC

Project Manager: Dakota Neel

Address: 2208 West Main

City: Artesia

Phone #: (575) 748-6930

Project #:

Project Name: Stratoljet 31 SI COM 6H BATTERY

Project Location:

Sampler Name: Dakota Neel

P.O. #:

Company: COG Operating LLC

Attn: Robert McNeill

Address: 600 W Illinois

City: Midland

State: TX Zip: 79701

Phone #: (432) 221-4388

Fax #:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

FOR LAB USE ONLY		Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		BTX		TPH		Chloride													

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Relinquished By: DAKOTA NEEL

Relinquished By:

Received By: Judy Durcia
Date: 10/4/15
Time: 12:40

Time:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other: #54

38°C

Sample Condition
Cool ☒ Intact ☒
Yes ☒ No ☐

CHECKED BY:

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: dneel2@concho.com qcarrasco@concho.com



CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2 of 2

ANALYSIS REQUEST

P.O. #:

Company: COG Operating LLC

Attn: Robert McNeil

Address: 600 W Illinois

City: Midland

State: TX Zip: 79701

Phone #: (432) 221-0368

Fax #:

Company Name: COG Operating LLC

Project Manager: Dakota Neel

Address: 2208 West Main

City: Artesia State: NM Zip: 88210

Phone #: (575) 748-0930 Fax #:

Project #: Project Owner:

Project Name: Stratigat 31 St COM 6H BATTERY

Project Location:

Sampler Name: Dakota Neel

FOR LAB USE ONLY

Lab I.D. Sample I.D.

#50000

S4 - Surface

S4 - 1'

S5 - Surface

S5 - 1'

S6 - Surface

S6 - 1'

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

BTEX

TPH

Chloride

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Relinquished By: Received By:

DAKOTA NEEL

Relinquished By:

Date:

Time:

Received By:

Date:

Time:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Sample Condition

Cool / Inject

Yes

No

CHECKED BY:

(Initials)

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: dneel2@concho.com qcarasco@concho.com