

March 31, 2017

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

Re: White Star Federal Tank Battery

Sec. 29, T17S-R29E Eddy County, NM

Mr. Mike Bratcher,

COG Operating LLC would like to submit for your consideration the enclosed work plan for the above captioned well. The plan is in response to the C-141 Initial report dated September 21, 2016.

Background

This release was caused by a corroded connection between the tank and sight glass. Upon discovery, the corroded connection was repaired and a vac truck was dispatched to recover standing fluid. The release remained within the unlined facility.

Groundwater

Based on the information obtained through the use of the Chevron-Texaco Maps, the release area would be classified at a site ranking of **Zero** with depth to groundwater at greater than 150'.

Soil Assessment and Analytical Results

The sample points for the release are labeled as T1 and AH1 on the attached Site Diagram. According to the analytical results obtained, T1 and AH1 had elevated concentrations of chloride to a depth of 2' with delineation showing a decrease in concentration. Copies of the analytical results along with a site diagram and sample summary table are attached for your consideration.

	White Star	Federal Tank Battery	
	Site	Ranking: Zero	
	Depth to	GW per SEO: >100	
Delineatio	n Samples 7/8/16	Delineation Sample	es 11/16/2016
T1	GI-	AH1	CI-
1'	1150	Surface	608
2'	400	1'	1800
3'	240	2'	3120
4'	352	3'	928
5'	400	4'	832
7'	288	5'	704
8'	256		
10'	272	X	
12'	64		

Work Plan

COG Operating LLC proposes the following excavations for remediation of the release area:

T1 & AH1— Excavate to a depth of approximately 1'-2' due to the close proximity of the release to equipment and safety concerns.

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.

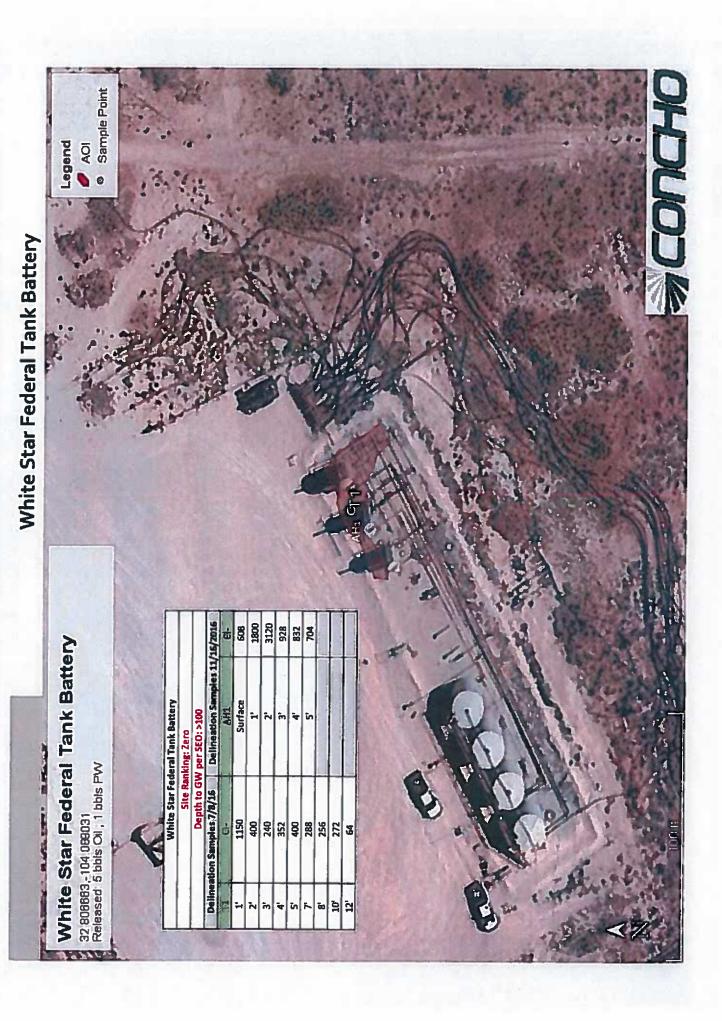
Sincerely,

Dakota Neel,

Environmental Coordinator

Enclosure(s): Site Diagram

Sample Summary Table Analytical Results C-141 Initial (Copy)



District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Bruzos 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.

	OPERAT	TOR	⊠ Init	tial Report	☐ Final	
Name of Company: COG Operating LLC		bert McNeill			HEWEST, ASSESSED	
Address: 600 West Illinois Avenue, Midland TX 79701		No. 432-230-00	77	THE SEASON	TITE WELL	
Facility Name: White Star Federal Tank Battery	Facility Typ	e: Baltery				
Surface Owner: Federal Mineral Ov	Owner: Federal API No. 30-015-29					
LOCAT	TION OF REI	LEASE				
	North/South Line Feet from the East/West Line North 330 East					
.8068848,-104.089447	North 330 East				Eddy	
	URE OF RELE					
Type of Release: Oil & Produced Water	Volume of Release: Volume Recovered:					
Source of Release: Sight Glass	5 bbls oil; I	our of Occurrent	4 bbls of	il: 0.5 bbls pw i Hour of Dis	COVERY	
	9/14/2016 u			6 8:00 a.m.		
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Requ	uired If YES, To	Whom?				
By Whom?	Date and H			3.5		
Was a Watercourse Reached? ☐ Yes ☑ No	ITYES, Vo	lume Impacting	the Watercourse.			
If a Watercourse was Impacted, Describe Fully.*						
Describe Cause of Problem and Remedial Action Taken.* This release was caused by a corneled connection between the took	and sight place. Th	a complete some				
Describe Cause of Problem and Remedial Action Taken.* This release was caused by a corroded connection between the tank	and sight glass. The	e corroded conn	ection was replaced	d,		
This release was caused by a corroded connection between the tank Describe Area Affected and Cleanup Action Taken.*						
Describe Cause of Problem and Remedial Action Taken.* This release was caused by a corroded connection between the tank Describe Area Affected and Cleanup Action Taken.* This release remained on location within the berned area. Vacuum tagravel has been removed and replaced with fresh gravel. Concho within the will present a remediation work plan to the NMOCD for apprint	trucks were immedia	ately dispatched	to recover all stance	ding fluid. Ti	he contaminate an from the rele	
This release was caused by a corroded connection between the tank Describe Area Affected and Cleanup Action Taken. This release remained on location within the bermed area. Vacuum to pravel has been removed and replaced with fresh gravel. Concho wind we will present a remediation work plan to the NMOCD for appulations are remained to report and/or file certain release upblic health or the environment. The acceptance of a C-141 report is a contract to the contract of the c	trucks were immediately that the spill site frown prior to any sign of the to the best of my keeps on the NMOCD manediate contamination	ately dispatched e sampled to deli gnificant remedi cnowledge and u d perform correc rked as "Final Re	to recover all stand neate any possible ation work. Inderstand that purs tive actions for rele eport. does not rele	ding fluid. To contamination	OCD rules and nay endanger to of liability	
This release was caused by a corroded connection between the tank Describe Area Affected and Cleanup Action Taken. This release remained on location within the bermed area. Vacuum to gravel has been removed and replaced with fresh gravel. Concho would we will present a remediation work plan to the NMOCD for appulations are required to report and/or file certain relegalistions all operators are required to report and/or file certain relegable health or the environment. The acceptance of a C-141 report inhould their operations have failed to adequately investigate and remove the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment.	trucks were immediately that the spill site frown prior to any sign of the to the best of my keeps on the NMOCD manediate contamination	ately dispatched a sampled to deli gnificant remedi unowledge and ut derform correctived as "Final Ron that pose a thre the operator of r	to recover all stand neate any possible ation work. Inderstand that purs tive actions for rele eport. does not rele	ding fluid. To contamination sugart to NMC cases which a leve the opera- r, surface wat- compliance wi	OCD rules and nay endanger ator of liability er, human healt th any other	
This release was caused by a corroded connection between the tank Describe Area Affected and Cleanup Action Taken.* This release remained on location within the bermed area. Vacuum to gravel has been removed and replaced with fresh gravel. Concho within the bermed area. Vacuum to gravel has been removed and replaced with fresh gravel. Concho with we will present a remediation work plan to the NMOCD for appulation of the certain remediation work plan to the NMOCD for appulations all operators are required to report and/or file certain relevant to the certain of the environment. The acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report to the environment. In addition, NMOCD acceptance of a C-141 report to the environment. In addition, NMOCD acceptance of a C-141 report to the environment. In addition, NMOCD acceptance of a C-141 report to the environment.	trucks were immediable have the spill site storal prior to any sign to the best of my known as notifications and by the NMOCD manediate contamination part does not relieve	ately dispatched a sampled to deli gnificant remedi unowledge and ut derform correctived as "Final Ron that pose a thre the operator of r	to recover all stand neate any possible ation work. Inderstand that purs- tive actions for rele eport" does not reli- tat to ground water esponsibility for co	ding fluid. To contamination sugart to NMC cases which a leve the opera- r, surface wat- compliance wi	OCD rules and nay endanger ator of liability er, human healt th any other	
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This release was caused by a corroded connection between the tank Describe Area Affected and Cleanup Action Taken.* This release remained on location within the bermed area. Vacuum to gravel has been removed and replaced with fresh gravel. Concho would we will present a remediation work plan to the NMOCD for appute the properties of the present and complete egulations all operators are required to report and/or file certain release to the properties of a C-141 report in the environment. The acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment. In addition, NMOCD acceptance of a C-141 report in the environment.	trucks were immediable have the spill site roval prior to any slate to the best of my knase notifications and by the NMOCD manediate contamination out does not relieve	ately dispatched a sampled to deli gnificant remedi cnowledge and u d perform correctived as "Final Roan that pose a threathe operator of a OIL CONSTITUTION CONTRACTION CONTR	to recover all stand neate any possible ation work. Inderstand that pure tive actions for rele eport" does not reli- eat to ground water esponsibility for co- secialist:	ding fluid. Ti contamination sugant to NMC cases which a lieve the operar, surface wat compliance wi	OCD rules and nay endanger stor of liability er, human healt th any other	



January 31, 2017

DAKOTA NEEL

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: WHITE STAR FEDERAL TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 01/25/17 12:15.

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.tceg.texas.gov/field/ga/lab accredited analytes and matrices visit the TCEQ website at www.tceg.texas.gov/field/ga/lab accredited certif.html.

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

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

Accreditation applies to public drinking water matrices.

Celeg D. Keine

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Received:

01/25/2017

Reported: Project Name: 01/31/2017

WHITE STAR FEDERAL TANK BATTERY

Project Number: Project Location:

Analyte

Analyte

Analyte

NONE GIVEN

NOT GIVEN

Sampling Date:

Sampling Type:

Soit

Sampling Condition: Sample Received By: ** (See Notes) Angela Cabrera

01/23/2017

Sample ID: T1 - 1' (H700184-01)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AC

1150

Reporting Limit 16.0

Reporting Limit

Reporting Limit

16.0

Analyzed 01/28/2017

Analyzed

Method Blank ND

85 % Recovery

432

BS

True Value QC 400

RPD 3.77

RPD

3.77

Qualifier

Sample ID: T1 - 2' (H700184-02)

Chloride, 5M4500Cl-B

mg/kg

Analyzed By: AC

Method Blank

% Recovery

108

% Recovery

108

108

Chloride

Chloride

Chloride

400

Result

240

16.0 01/28/2017

432

True Value QC 400

Qualifier

Sample ID: T1 - 3' (H700184-03)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AC

Analyzed

01/28/2017

Method Blank

ND

ND

ND

BS 432 True Value QC

400

400

RPD

3.77

Qualifler

Sample ID: T1 - 4' (H700184-04)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte Result Reporting Limit Chloride 352

16.0

Analyzed

01/28/2017

Method Blank 85 432 % Recovery 108

True Value QC

RPD 3.77 Qualifier

Cardinal Laboratories

*=Accredited Analyte

by out of its related to the parties

Calley D. Ken



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

Received: Reported: 01/25/2017

01/31/2017

Project Name:

WHITE STAR FEDERAL TANK BATTERY

Project Number:

NONE GIVEN

Project Location: **NOT GIVEN** Sampling Date:

Sampling Type:

01/23/2017

Sampling Condition:

Soil ** (See Notes)

Sample Received By:

Angela Cabrera

Sample ID: T1 - 5' (H700184-05)

Chloride, SN4500CI-B

mg/kg

Analyzed By: AC

Analyte

Result

Reporting Limit

Analyzed

Method Blank

BS 108

% Recovery

True Value QC 400

Qualifier

Chloride

Chloride

400

Result

288

16.0

Reporting Limit

16.0

01/28/2017

Analyzed

01/28/2017

ND

432

RPD 3.77

Sample ID: T1 - 7' (H700184-06)

Chloride, SM4500CI-B

Analyte

Analyte

Analyte

Analyte

mg/kg

Analyzed By: AC

Method Blank

ND

ÐS 432 % Recovery 108

True Value QC 400

RPD

Qualifier

Sample ID: T1 - 8' (H700184-07)

Chloride, SH4500CI-B

mg/kg

Analyzed By: AC

3.77

Chloride

Chloride

Chloride

Result 256

Reporting Limit 16.0

Analyzed 01/28/2017 Method Blank ND

85 432 % Recovery 108

True Value QC

RPD

Qualifier

Analyzed By: AC

400

3,77

Sample ID: T1 - 10' (H700184-08)

Chloride, SM4500CI-B

mg/kg

Result

272

Result

64.0

Reporting Limit

16.0

Reporting Limit

16.0

Analyzed 01/28/2017

Analyzed

01/28/2017

Method Blank

ND

BS

% Recovery

True Value QC

RPD

Qualifler

432

Sample ID: T1 - 12' (H700184-09)

Chloride, SM4500CI-B

mg/kg

Analyzed By: AC

Method Blank

ND

BŞ

432

108

% Recovery

108

400

True Value QC

400

3.77

RPD

3.77

Qualifier

Cardinal Laboratories

*=Accredited Analyte

PLEME MOTE: Unaday and

Celley D. Kein



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

Chloride by SM4500Cl-6 does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Labelity and Company. Curdent's builday and clearty enclains or recently for any clear integr, solution based in service or text, studi for Service in the animate paid by clear for instrument. All cleares, including three for engineers and any other many shifteness will be cleared unless studied or less studied or companies of the applicable service. In no event shull Curdent on being the instrument and companies of the applicable service. In no event shull Curdent on being the instrument and companies of the service of the ser

Cologo Kune

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

16 JOOL A Sampler - UPS - Bus - Other: Project Location: Project F Project Manager: Dekota Neel (575) 393-2326 FAX (575) 393-2476 Company Name: COG Operating LLC Project Name: White Star Federal Tank Battery Address: 2208 West Main Delivered By: (Circle One) ACHO SEN BY MOL hone : elinquished By: Lab I.D. mpler Name: 252222525 432-215-2783 Sample I.D. T1-10" 114° T1-7 11-5 T1-4' T1-3' T1-2" 71-1 Sirt men 11-52-17 Fax #: Theres Date: Project Owner: State: NM (G)RAB OR (C)OMP # CONTAINERS 봄 GROUNDWATER WASTEWATER 88210 SOIL OIL BLUDGE OTHER Phone #: (432) 221-0388 State: TX À PO # Address: ompany: ACID/BASE ICE / COOL OTHER W. 70 Zip: 79701 COG Operating LLC 1/23/17 1/23/17 1/23/17 1/23/17 1/23/17 Robert McNeil 1/23/17 10:00 AM 1/23/17 10:00 AM 1/23/17 10:00 AM 1123/17 SAMPLING DATE BOO W Elmois Midbard Phone Result: Fax Result: REMARKS: 10:00 AM 10:00 AM 10:00 AM 10:00 AM 10.00 AM 10:00 AM BTEX 0 0 1 4 8 TPH ××××××××× Chloride 00 88 dnee/2/pondro.com Add'l Phone Add'l Fax #: ANALYSIS REQUEST

s. Please fax written changes to 575-393-2476



December 01, 2016

AARON LIEB
COG OPERATING
P. O. BOX 1630
ARTESIA. NM 88210

RE: WHITE STAR FEDERAL TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 11/30/16 11:34.

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/ga/lab-accred-certif.html.

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

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

Celey D. Keine

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



COG OPERATING AARON LIEB P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received: Reported: 11/30/2016

12/01/2016

Project Name:

WHITE STAR FEDERAL TANK BATTERY

Project Number: Project Location: NONE GIVEN **NOT GIVEN**

Sampling Date:

11/16/2016

Sampling Type:

Soil

Sampling Condition: Sample Received By:

Cool & Intact

Angela Cabrera

Sample ID: AH 1 @ SURFACE (H602672-01)

BTEX 8021B	mg/	kg	Analyzi	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/30/2016	ND	2.10	105	2.00	1.81	
Toluene*	<0.050	0.050	11/30/2016	ND	2.16	108	2.00	1.71	
Ethylbenzene*	<0.050	0.050	11/30/2016	ND	2.12	106	2.00	1.69	
Total Xylenes*	<0.150	0.150	11/30/2016	ND	6.35	106	6.00	1.68	
Total BTEX	<0.300	0.300	11/30/2016	ND					
Surrogate 4-Bramofluorobenzene (PIC	113 9	73.6-140)		W-8-				
Chloride, 5H4500CI-B	mg/l	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	12/01/2016	ND	400	100	400	0.00	
TPH 8015M	mg/l	q	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/30/2016	ND	190	95.1	200	6.67	
DRO >C10-C28	360	10.0	11/30/2016	ND	198	99.2	200	11.3	QM-07
Surrogate: 1-Chlorooctane	80.49	35-147							
Surrogate: 1-Chlorooctadecane	91.1%	28-171							

Cardinal Laboratories

*=Accredited Analyte

Celleg D. Ken



COG OPERATING AARON LIEB P. O. BOX 1630 ARTESIA NM, 88210 Fax To: NONE

Received:

11/30/2016

Sampling Date:

11/16/2016

Reported:

12/01/2016

Sampling Type:

Soil

Project Name:

WHITE STAR FEDERAL TANK BATTERY

Sampling Condition:

Cool & Intact

Project Number:

Project Location:

NONE GIVEN NOT GIVEN

Sample Received By:

Angela Cabrera

Sample ID: AH 1 @ 1' (H602672-02)

BTEX 8021B	mg	/log	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
Benzene*	<0.050	0.050	11/30/2016	ND	2.10	105	2.00	1.81	
Toluene*	<0.050	0.050	11/30/2016	ND	2.16	108	2.00	1.71	
Ethylbenzene*	<0.050	0.050	11/30/2016	ND	2.12	106	2.00	1.69	
Total Xylenes*	<0.150	0.150	11/30/2016	ND	6.35	106	6.00	1.68	

ND

11/30/2016

Total BTEX

0.300

< 0.300

Surrogate: 4-Bromofluoroberzene (PIC Chlorida, SM4500CI-8		% 73 6-14 /kg		d By: AC					
Analyte Chloride TPH 8015M	Result 1800 mg	Reporting Limit 16.0	Analyzed 12/01/2016 Analyze	Method Blank ND d By: MS	85 400	% Recovery	True Value QC 400	RPD 0.00	Qualifier
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifler
GRO C6-C10	<10.0	10.0	11/30/2016	ND	190	95.1	200	6.67	
DRO >C10-C28	<10.0	10.0	11/30/2016	ND	198	99.2	200	11.3	

Surrogate: 1-Chlorooctane

81.7%

35-147

Surrogate: 1-Chlorooctadecane

68.4 %

28-171

Cardinal Laboratories

*=Accredited Analyte

Celegro Ke



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

Received:

11/30/2016

Sampling Date:

11/16/2016

Reported:

12/01/2016

Sampling Type:

Soll

Project Name:

WHITE STAR FEDERAL TANK BATTERY

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Angela Cabrera

Project Location:

NOT GIVEN

Sample ID: AH 1 @ 2' (H602672-03)

BTEX 8021B	mg/	log	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/30/2016	ND	2.10	105	2.00	1.81	
Toluene*	<0.050	0.050	11/30/2016	ND	2.16	108	2.00	1,71	
Ethylbenzene*	<0.050	0.050	11/30/2016	ND	2.12	106	2.00	1.69	
Total Xylenes*	<0.150	0.150	11/30/2016	ND	6.35	106	6.00	1.68	
Total STEX	<0.300	0.300	11/30/2016	ND					
Surrogate 4-Bromofluorobenzene (PIC	113 9	6 73.6-14	o						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3120	16.0	12/01/2016	ND	400	100	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/30/2016	ND	190	95.1	200	6.67	
DRO >C10-C28	<10.0	10,0	11/30/2016	ND	198	99.2	200	11.3	
Surrogate: I-Chlorooctane	78.1 9	\$ 35-147					8		
Surrogate: 1-Chlorooctadecane	62.7 9	6 28-171							

Cardinal Laboratories

*=Accredited Analyte





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

Received:

11/30/2016

Sampling Date:

11/16/2016

Reported:

12/01/2016

Sampling Type:

Soll

Cool & Intact

Project Name:

WHITE STAR FEDERAL TANK BATTERY

Sampling Condition:

Project Number: Project Location: **NONE GIVEN**

NOT GIVEN

Sample Received By:

Angela Cabrera

Sample ID: AH 1 @ 3' (H602672-04)

BTEX 8021B	mg/i	kg	Analyze	ed By: MS					100
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	11/30/2016	ND	2.10	105	2.00	1.81	
Toluene*	<0.050	0.050	11/30/2016	ND	2.16	108	2.00	1.71	
Ethylbenzene*	<0.050	0.050	11/30/2016	ND	2.12	106	2.00	1.69	
Total Xylenes*	<0.150	0.150	11/30/2016	ND	6.35	106	6.00	1.68	
Total BTEX	<0.300	0.300	11/30/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	114%	73 6-14	0						
Chloride, SM4500CI-B	mg/l	eg .	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	928	16.0	12/01/2016	ND	400	100	400	0.00	
TPH 8015M	mg/l	rg .	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/30/2016	ND	190	95.1	200	6.67	
DRO >C10-C28	<10.0	10.0	11/30/2016	ND	198	99.2	200	11.3	
Surrogate: 1-Chlorooctane	72.0 %	35-147							
Surrogate: 1-Chlorooctadecane	55.8 50	28-171							

Cardinal Laboratories

*=Accredited Analyte



COG OPERATING AARON LIEB P. O. BOX 1630 ARTESIA NM, 88210 NONE Fax To:

Received:

STEX 80218

11/30/2016

Sampling Date:

11/16/2016

Reported:

12/01/2016

Sampling Type:

Soil

Project Name:

WHITE STAR FEDERAL TANK BATTERY

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Angela Cabrera

Project Location:

NOT GIVEN

Sample ID: AH 1 @ 4' (H602672-05)

OTEX GOLLE	iii gi	I my	Milityae	a ayı ma					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	11/30/2016	ND	2.10	105	2.00	1.81	
Toluene*	<0.050	0.050	11/30/2016	ND	2.16	108	2.00	1.71	
Ethylbenzene*	<0.050	0.050	11/30/2016	ND	2.12	106	2.00	1.69	
Total Xylenes*	<0.150	0.150	11/30/2016	ND	6.35	106	6,00	1.68	
Total BTEX	< 0.300	0.300	11/30/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIC Chloride, SM4500CI-B	//4 mg			id By: AC					
Analyte Chloride	Result	Reporting Limit	Analyzed 12/01/2016	Method Blank ND	BS 400	% Recovery	True Value QC	RPD 0.00	Qualifier
TPH 8015M	mg.	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/30/2016	ND	190	95.1	200	6.67	
DRO >C10-C28	<10.0	10.0	11/30/2016	ND	198	99.2	200	11.3	
Surrogate. 1-Chlorooctane	76.6	% 35-147	,						

Surrogate: 1-Chlorooctadecane 60.6 % 28-171

Cardinal Laboratories

*=Accredited Analyte



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

Received: Reported:

Total BTEX

11/30/2016

12/01/2016

Project Name:

WHITE STAR FEDERAL TANK BATTERY

NONE GIVEN

Project Number: Project Location:

NOT GIVEN

< 0.300

0.300

Sampling Date:

Sampling Type:

11/16/2016

Sampling Condition:

Soil

Sample Received By:

Cool & Intact Angela Cabrera

Sample ID: AH 1 @ 5' (H602672-06)

BTEX 8021B	mg	/leg	Analyza	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/30/2016	ND	2.10	105	2.00	1.81	
Toluene*	<0.050	0.050	11/30/2016	ND	2.16	108	2,00	1.71	
Ethylbenzene*	<0.050	0.050	11/30/2016	ND	2.12	106	2.00	1.69	
Total Xylenes*	<0.150	0.150	11/30/2016	ND	6.35	106	6.00	1.68	

ND

11/30/2016

Surrogate: 4-Bromofluorobenzene (PIC Chloride, SM4500Ci-8	116 mg.	, , , , ,		ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	16.0	12/01/2016	ND	400	100	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/30/2016	ND	190	95.1	200	6.67	
DRO >C10-C28	<10.0	10.0	11/30/2016	ND	198	99.2	200	11.3	
Surrogate 1-Chlorooctane	83.2	% 35-147							

Surrogate: 1-Chlorooctane 83.2 % Surrogate: 1-Chlorooctadecane 74.2 % 28-171

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PLEASE NOTE: Limiting and Do

Celley D. Kan



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 5M4500Cl-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

Cardinal Laboratories

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PLEASE NUTS: Liability and Dovroges. Cardinal's labelity and Courses archarine execute for any other arms, whether based in current art of the amount related by close for analysis. All closes, including means for analysis and recovered by Cardinal under their particular and the application arms. In on over shall Continue be labele for including, without because, tookness accompliance, took or included by the performance of the application of the

Celey D. Kuma

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

	1000						
Company Name:	COG Operating LLC		at 71/8		- Parent	ANALYSIS REQUEST	Objili
Project Manager:	Aaron Lieb		P.O. #:				
Address: 2407	2407 Pecos Avenue		Company: cog Op	COG Operating LLC			
City: Artesia	State: NM	Zip 88210		AcNes			
Phone #:	575-748-1553 Fax #:		Address: 600 W	600 W Illinois	100		ACTUAL TO SERVICE
Project #:	Project Owner:	97	City: Midland	ā			-
Project Name: W	White Star Federal Tank Battery		State: TX Zip: 79701	701			
Project Location:			Phone #: (432) 221-0388	8			1
Sampler Name:	Aaron Lieb		Facet				PLT:
Alto SEN BYT BOA		MATAN	PRESERV SAMPLING	Ž.KG	New Y		509
HIPOTHAN TABLID	Sample I.D.	(G)RAB OR (C)OMP CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER ACID/BASE ICE / COOL OTHER	ETEX	ТРН	Chloride	
	AH1 @ surface		×	6 2:30 PM X	×	×	
2	AH1 @ 1'		X 11/16/16	2:30 PM		X	MATERIAL TO
G	AH1@2"			2:30 PM		X International Control of the Contr	1000
1	AH1@3*		X 11/16/16	11	×	X Statement of the Control of the Co	10-(3)
CA	AH1 @ 4"		X 11/16/16	6 2:30 PM X	×	The state of the s	
6	AH1 @ 5'		Х 11/16/16		×	X	1005/25
ALAM INTELLIBRATION	mages. Combinets techniques d'autres processes en la programa des la mages processes en la programa d'autres processes en la programa de la processe de la p						100
Relinquished By:	Time: Time:	Charle (abreas	Phone feault: U Yes Fee Result: U Yes REIAARUS: U Yes anied/2/20concho.com anied/2/20concho.com anied/2/20concho.com	wit: □ Yes Wit: □ Yes KS: Dicondro.com condro.com	No Add'l Phone #:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other	475	4.70 Grand Year	CHECKED BY:			124 BLEX	230-23