ENSOLUM

July 27, 2022

District 1
New Mexico Oil Conservation Division
1625 North French Drive
Hobbs, New Mexico 88240

Re: Closure Request
King Cobra 2 State 001H
Incident Number NAPP2205234848
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of COG Operating, LLC (COG), has prepared this Closure Request to document excavation and soil sampling activities performed at the King Cobra 2 State 001H (Site). The purpose of the excavation and soil sampling activities was to address stained soil resulting from a crude oil flare fire at the Site. Based on the excavation activities and laboratory analytical results from the soil sampling events, COG is submitting this Closure Request, describing remediation that has occurred and requesting closure for Incident Number NAPP2205234848.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 02, Township 19 South, Range 34 East, in Lea County, New Mexico (32.69537° N, 103.52385° W) and is associated with oil and gas exploration and production operations on New Mexico State Land.

On February 6, 2022, high pressure fluids were pushed through the flare, resulting in approximately 0.008 barrels (bbls) of crude oil released through the flare. The released crude oil ignited and extinguished itself after reaching the ground. COG reported the release immediately via email to the New Mexico Oil Conservation Division (NMOCD) on February 7, 2022 and submitted a Release Notification Form C-141 (Form C-141) on February 21, 2022. The release was assigned Incident Number NAPP2205234848.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well L-11934, located approximately 0.37 miles northwest of the Site. The groundwater well has a reported depth to

groundwater of 105 feet bgs and a total depth of 160 feet bgs. Ground surface elevation at the groundwater well location is 3,983 feet above mean sea level (amsl), which is approximately 8 feet higher in elevation than the Site. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Attachment 1.

The closest continuously flowing or significant watercourse to the Site is a freshwater emergent wetland, located approximately 487 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is not within a 100-year floodplain or overlying a subsurface mine. The Site is greater than 1,000 feet to a freshwater well. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

EXCAVATION AND SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

On May 4, 2022, Ensolum personnel were at the Site to oversee excavation activities based on information provided on the Form C-141 and visible staining in the release area. Excavation activities were performed using a track-mounted backhoe, hand shovels, and a transport vehicle. To direct excavation activities, soil was field screened for volatile organic compounds (VOCs) and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The excavation was completed to a depth of 0.5 feet bgs. Photographic documentation of the excavation activities is included in Appendix B.

Following removal of the stained soil, 5-point composite soil samples were collected every 200 square feet from the floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS03 were collected from the floor of the excavation at a depth of 0.5 feet bgs. Due to the shallow depth of the excavation, soil from the sidewalls was incorporated into the floor samples. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH- GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

The excavation area measured approximately 535 square feet in areal extent. A total of approximately 10 cubic yards of stained soil was removed during the excavation activities. The soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico. The excavation extent and soil sample locations are presented on Figure 2.

Additionally, four lateral delineation soil samples (SS01 through SS04) were collected around the release extent at a depth of 0.3 feet bgs to confirm the lateral extent of the release.

Laboratory analytical results for excavation floor samples FS01 through FS03 and lateral delineation soil samples SS01 through SS04 indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the most stringent Table 1 Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

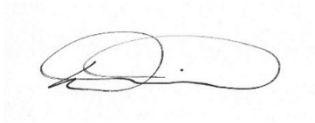
CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the February 2022, crude oil flare fire release. Laboratory analytical results for the excavation soil samples and lateral delineation soil samples indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the most stringent Table 1 Closure Criteria. Based on the soil sample laboratory analytical results, no further remediation was required. COG will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions.

Excavation of stained soil has mitigated impacts at this Site. COG believes the remedial actions are protective of human health, the environment, and groundwater. As such, COG respectfully requests closure for Incident Number NAPP2205234848. The Final C-141 is included in Appendix E.

If you have any questions or comments, please contact Ms. Kalei Jennings at (817) 683-2503 or kjennings@ensolum.com.

Sincerely,
Ensolum, LLC



Kalei Jennings
Senior Scientist

Daniel R. Moir, P.G.
Senior Managing Geologist

cc: Charles Beauvais, COG Operating, LLC
New Mexico State Land Office

Appendices:

Figure 1	Site Location Map
Figure 2	Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix D	NMOCD Sample Notification
Appendix E	Final C-141

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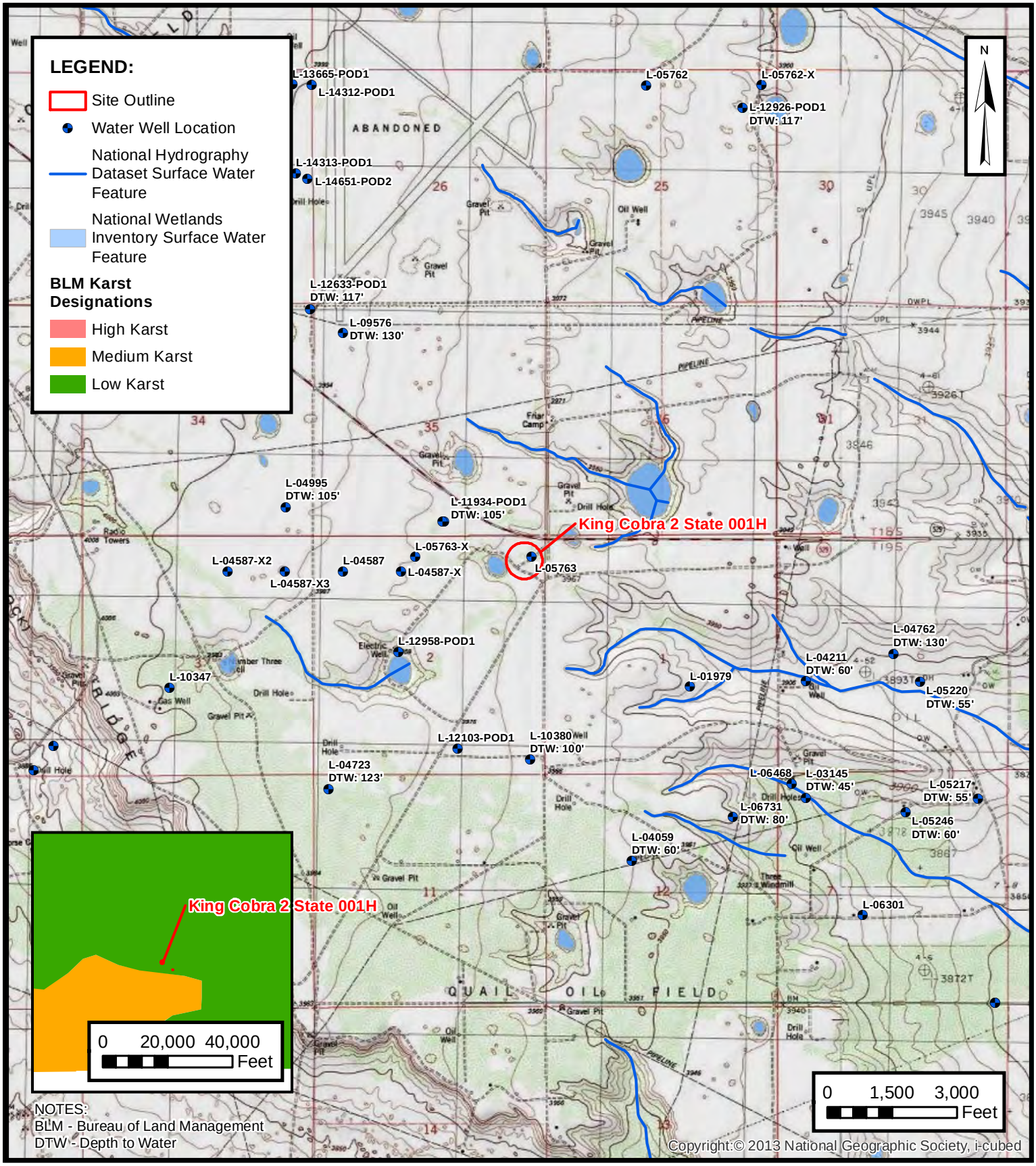
FIGURES



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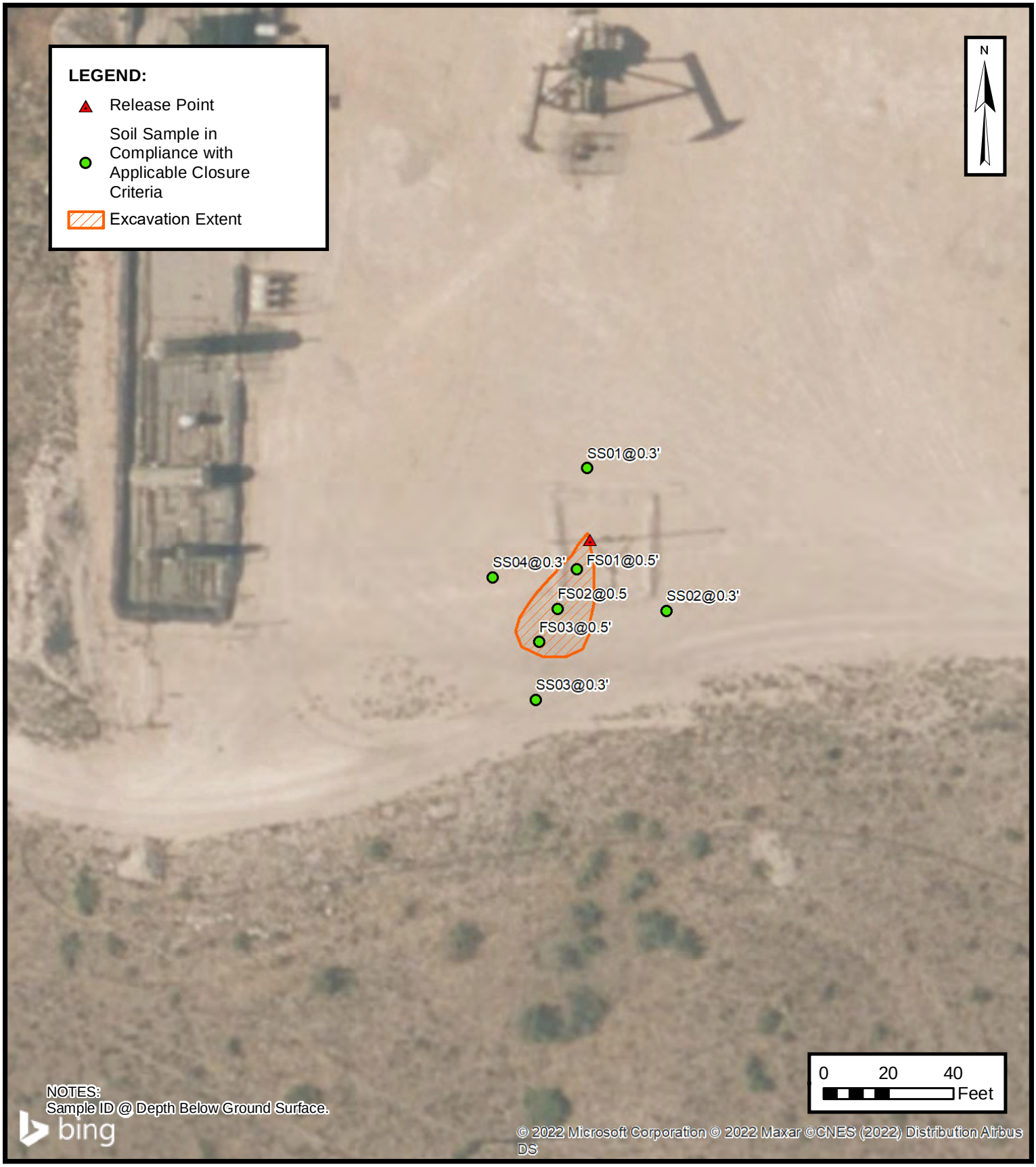
SITE RECEPTOR MAP

COG OPERATING, LLC
KING COBRA 2 STATE 001H
NAPP2205234848
Unit A, Sec 2 T19S R34E
Lea County, New Mexico

FIGURE
1



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SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
KING COBRA 2 STATE 001H
NAPP2205234848
Unit A, Sec 2 T19S R34E
Lea County, New Mexico

FIGURE
2

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
King Cobra 2 State 001H
ConocoPhillips Company
Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
Preliminary Assessment Soil Samples										
SS01	05/04/2022	0.3	<0.000385	<0.00101	<15.0	23.3	<15.0	23.3	23.3	168
SS02	05/04/2022	0.3	<0.000387	<0.00101	<15.0	28.8	<15.0	28.8	28.8	494
SS03	05/04/2022	0.3	<0.000389	<0.00102	<15.0	26.0	<15.0	26.0	26.0	92.5
SS04	05/04/2022	0.3	<0.000386	<0.00101	<14.9	26.3	<14.9	26.3	26.3	80.1
Excavation Floor Soil Samples										
FS01	05/04/2022	0.5	<0.000389	<0.00102	<15.0	90.6	<15.0	90.6	90.6	124
FS02	05/04/2022	0.5	<0.000387	<0.00102	26.5	69.1	<15.0	95.6	96.0	185
FS03	05/04/2022	0.5	<0.000388	<0.00102	<15.0	33.5	<15.0	33.5	33.5	9.75

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
* indicates sample was collected in area to be reclaimed after remediation is complete; reclamation standard for chloride in the top 4 feet is 600 mg/kg
Grey text represents samples that have been excavated

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APPENDIX A

Referenced Well Records

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: L 11934 **Subbasin:** L **Cross Reference:** -

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 3 **Cause/Case:** -

Owner: WILBERTA TIVIS

x

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	490622	72121	2006-06-29	PMT	LOG	L 11934	T		3	

x

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
L 11934 POD1		Shallow	3	3	4	35	18S	34E	637806	3618744*	

***An (*) after northing value indicates UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	L 11934 POD1	3	3	4	35	18S	34E	637806	3618744*

Driller License: 1414 **Driller Company:** NOT FOR HIRE-DESERT SAND WATER WELL

Driller Name: THOMPSON, STEVE (LD)

Drill Start Date:	10/13/2006	**Drill Finish Date:**	10/20/2006	**Plug Date:**	
Log File Date:	10/24/2006	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	5.00	**Depth Well:**	160 feet	**Depth Water:**	105 feet

Water Bearing Stratifications:	Top	Bottom	Description
	105	160	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	100	160

***UTM location was derived from PLSS - see Help**

National Water Information System: Web Interface

USGS Water Resources (Cooperator Access) Data Category: Site Information Geographic Area: United States GO

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

USGS 324107103301101 19S.35E.06.133314

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:

Latitude 32°41'25", Longitude 103°30'17" NAD27
Lea County, New Mexico , Hydrologic Unit 13070007
Well depth: 130 feet
Land surface altitude: 3,922.00 feet above NGVD29.
Well completed in "High Plains aquifer" (N100HGHPLN) national aquifer.
Well completed in "Ogallala Formation" (121OGLL) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1961-03-09	1996-02-01	8
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

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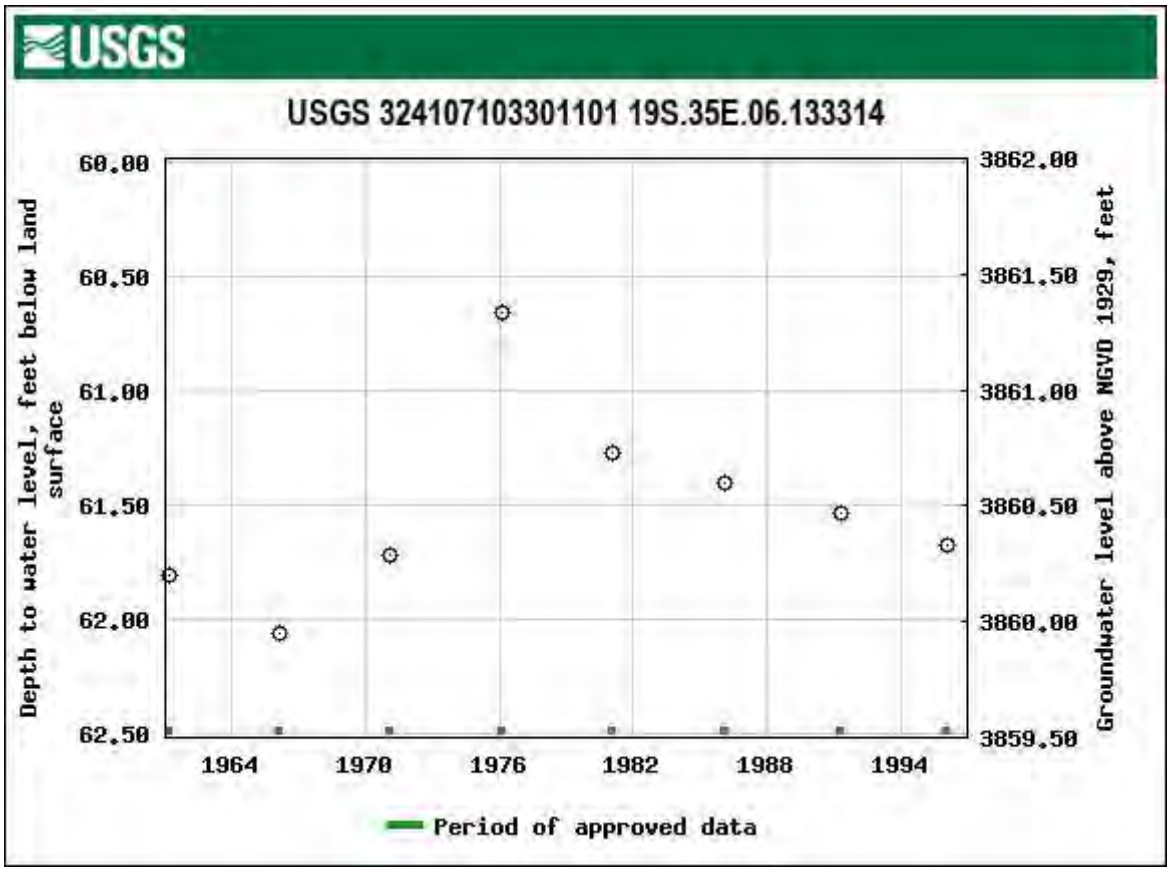
Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=324107103301101


USGS
USGS 324107103301101 19S.35E.06.133314
Depth to water level, feet below land surface
60.00
60.50
61.00
61.50
62.00
62.50
Groundwater level above NGVD 1929, feet
3862.00
3861.50
3861.00
3860.50
3860.00
3859.50
1964
1970
1976
1982
1988
1994
Period of approved data

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APPENDIX B

Photographic Log

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Photographic Log
COG Operating, LLC
King Cobra 2 State 001H
Incident Number NAPP2205234848

Photograph 1 Date: May 4, 2022
Description: Photo of release extent prior to excavation activities.

Photograph 2 Date: May 4, 2022
Description: Photo of release extent prior to excavation activities.

Photograph 3 Date: May 4, 2022
Description: Photo of completed excavation extent.

Photograph 4 Date: May 4, 2022
Description: Photo of completed excavation extent.

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APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-14487-1
Client Project/Site: King Cobra 2 State 1H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

JKramer

Authorized for release by:
5/16/2022 11:43:13 AM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Laboratory Job ID: 880-14487-1

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-14487-1
Project/Site: King Cobra 2 State 1H

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14487-1

Job ID: 880-14487-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-14487-1

Receipt
The sample was received on 5/6/2022 10:35 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8015MOD_NM: The method blank for preparation batch 880-24993 and analytical batch 880-25019 contained <AffectedAnalytes> above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-24971 and analytical batch 880-25317 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Ensolum
Job ID: 880-14487-1
Project/Site: King Cobra 2 State 1H

Client Sample ID: SS01
Lab Sample ID: 880-14487-1

Date Collected: 05/04/22 14:47
Matrix: Solid
Date Received: 05/06/22 10:35
Sample Depth: 0.3'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		05/11/22 09:22	05/13/22 20:09	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		05/11/22 09:22	05/13/22 20:09	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		05/11/22 09:22	05/13/22 20:09	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		05/11/22 09:22	05/13/22 20:09	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		05/11/22 09:22	05/13/22 20:09	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		05/11/22 09:22	05/13/22 20:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*05/11/22 09:22*	*05/13/22 20:09*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*05/11/22 09:22*	*05/13/22 20:09*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00400	0.00101	mg/Kg			05/14/22 16:04	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**23.3**	**J**	50.0	15.0	mg/Kg			05/09/22 13:49	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 20:10	1
Diesel Range Organics (Over C10-C28)	**23.3**	**J B**	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 20:10	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 20:10	1
Total TPH	**23.3**	**J B**	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 20:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*05/06/22 14:42*	*05/07/22 20:10*	*1*
o-Terphenyl	*114*		*70 - 130*	*05/06/22 14:42*	*05/07/22 20:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**168**		25.2	4.32	mg/Kg			05/11/22 13:44	5

Surrogate Summary

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14487-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-14487-1	SS01	106	101										
880-14491-A-1-E MS	Matrix Spike	109	104										
880-14491-A-1-F MSD	Matrix Spike Duplicate	87	99										
LCS 880-25310/1-A	Lab Control Sample	95	101										
LCSD 880-25310/2-A	Lab Control Sample Dup	96	107										
MB 880-25310/5-A	Method Blank	74	96										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-14444-A-10-C MS	Matrix Spike	80	72										
880-14444-A-10-D MSD	Matrix Spike Duplicate	86	76										
880-14487-1	SS01	101	114										
LCS 880-24993/2-A	Lab Control Sample	85	84										
LCSD 880-24993/3-A	Lab Control Sample Dup	80	78										
MB 880-24993/1-A	Method Blank	92	106										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14487-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-25310/5-A
Matrix: Solid
Analysis Batch: 25497

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25310

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		05/11/22 09:22	05/13/22 11:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*05/11/22 09:22*	*05/13/22 11:47*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/11/22 09:22*	*05/13/22 11:47*	*1*

Lab Sample ID: LCS 880-25310/1-A
Matrix: Solid
Analysis Batch: 25497

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25310

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1103		mg/Kg		110	70 - 130		
Toluene			0.100	0.1036		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.09909		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.1991		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.09989		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-25310/2-A
Matrix: Solid
Analysis Batch: 25497

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25310

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1099		mg/Kg		110	70 - 130	0	35
Toluene			0.100	0.1003		mg/Kg		100	70 - 130	3	35
Ethylbenzene			0.100	0.1019		mg/Kg		102	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.2070		mg/Kg		103	70 - 130	4	35
o-Xylene			0.100	0.09990		mg/Kg		100	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14487-1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-24993/1-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24993

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1
Diesel Range Organics (Over C10-C28)	20.58	J	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1
Total TPH	20.58	J	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*05/06/22 14:42*	*05/07/22 12:08*	*1*
o-Terphenyl	*106*		*70 - 130*	*05/06/22 14:42*	*05/07/22 12:08*	*1*

Lab Sample ID: LCS 880-24993/2-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24993

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	960.1		mg/Kg		96	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	873.5		mg/Kg		87	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*85*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: LCSD 880-24993/3-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 24993

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	956.9		mg/Kg		96	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	803.7		mg/Kg		80	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*80*		*70 - 130*
o-Terphenyl	*78*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-24971/1-A
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.858	U	5.00	0.858	mg/Kg			05/11/22 10:12	1

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14487-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-24971/2-A
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	247.0		mg/Kg		99	90 - 110

Lab Sample ID: LCSD 880-24971/3-A
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	245.4		mg/Kg		98	90 - 110	1	20

QC Association Summary

Client: Ensolum
Job ID: 880-14487-1
Project/Site: King Cobra 2 State 1H

GC VOA

Prep Batch: 25310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14487-1	SS01	Total/NA	Solid	5035	
MB 880-25310/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25310/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25310/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 25497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14487-1	SS01	Total/NA	Solid	8021B	25310
MB 880-25310/5-A	Method Blank	Total/NA	Solid	8021B	25310
LCS 880-25310/1-A	Lab Control Sample	Total/NA	Solid	8021B	25310
LCSD 880-25310/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25310

Analysis Batch: 25571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14487-1	SS01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 24993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14487-1	SS01	Total/NA	Solid	8015NM Prep	
MB 880-24993/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-24993/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-24993/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 25019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14487-1	SS01	Total/NA	Solid	8015B NM	24993
MB 880-24993/1-A	Method Blank	Total/NA	Solid	8015B NM	24993
LCS 880-24993/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	24993
LCSD 880-24993/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	24993

Analysis Batch: 25118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14487-1	SS01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 24971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14487-1	SS01	Soluble	Solid	DI Leach	
MB 880-24971/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-24971/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-24971/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 25317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14487-1	SS01	Soluble	Solid	300.0	24971
MB 880-24971/1-A	Method Blank	Soluble	Solid	300.0	24971
LCS 880-24971/2-A	Lab Control Sample	Soluble	Solid	300.0	24971
LCSD 880-24971/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	24971

Lab Chronicle

Client: Ensolum
Job ID: 880-14487-1
Project/Site: King Cobra 2 State 1H

Client Sample ID: SS01
Lab Sample ID: 880-14487-1

Date Collected: 05/04/22 14:47
Matrix: Solid

Date Received: 05/06/22 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			25310	05/11/22 09:22	MR	XEN MID
Total/NA	Analysis	8021B		1	25497	05/13/22 20:09	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	25571	05/14/22 16:04	MR	XEN MID
Total/NA	Analysis	8015 NM		1	25118	05/09/22 13:49	AJ	XEN MID
Total/NA	Prep	8015NM Prep			24993	05/06/22 14:42	DM	XEN MID
Total/NA	Analysis	8015B NM		1	25019	05/07/22 20:10	AJ	XEN MID
Soluble	Leach	DI Leach			24971	05/06/22 16:02	SC	XEN MID
Soluble	Analysis	300.0		5	25317	05/11/22 13:44	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum Job ID: 880-14487-1
Project/Site: King Cobra 2 State 1H

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
8015B NM	8015NM Prep	Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum Job ID: 880-14487-1
Project/Site: King Cobra 2 State 1H

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum

Job ID: 880-14487-1

Project/Site: King Cobra 2 State 1H

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-14487-1	SS01	Solid	05/04/22 14:47	05/06/22 10:35	0.3'

Chain of Custody

Work Order No: 14487

XENCO LABORATORIES

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
Midland TX (432) 704-5440 EL Paso TX (915) 585-3443 Lubbock TX (806) 794-1296
Hobbs NM (575) 392 7550 Carlsbad NM (575) 988-3199 Phoenix, AZ (480) 355-0900
Tampa FL (813) 620-2000 Tallahassee FL (850) 756-0747 Delray Beach FL (561) 689-6701
Atlanta GA (770) 449-8800

www.xenco.com Page 1 of 1

Project Manager	Kalei Jennings	Bill to (if different)	Kalei Jennings
Company Name	Ensolum	Company Name	
Address		Address	
City State ZIP		City State ZIP	
Phone	817-693-2503	Email	Kjennings@ensolum.com

Work Order Comments

Program UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project
Reporting Level II ☒ Level II ☐ PST/US ☐ TRRP ☐ Level IV ☐
Deliverables EDD ☒ ADaPT ☐ Other

Project Name	King Cobra 2 State 1H	Turn Around	
Project Number		Routine	☒
Project Location		Rush	☐
Sampler's Name	Hadlie Green	Due Date	5DAY
PO #			

SAMPLE RECEIPT			
Temp Blank.	Yes (No)	Wet Ice	(Yes) No
Temperature (°C)	4.2/4.0	Thermometer ID	IR8
Received Intact:	(Yes) No		
Cooler Custody Seals	Yes No (N/A)	Correction Factor	-.2
Sample Custody Seals	Yes No (N/A)	Total Containers	

ANALYSIS REQUEST

Preservative Codes

HNO3 HN
H2S04 H2
HCL HL
None NO
NaOH Na
MeOH Me
Zn Acetate+ NaOH Zn

TAT starts the day recevied by the lab if received by 4 30pm

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	TPH 8015	BTEX 8021	CHLORIDES 300	Sample Comments
SS01	SL	5-4-22	1447	0.3'	1	X	X	X	

880-14487 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** Hg

Notice Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
1 Hadlie Green		5/6/22 10:35	2		
3			4		
5			6		

Revised Date101419 Rev 2019 1

Login Sample Receipt Checklist

Client: Ensolum Job Number: 880-14487-1

Login Number: 14487 **List Source: Eurofins Midland**
List Number: 1
Creator: Rodriguez, Leticia

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-14488-1
Client Project/Site: King Cobra 2 State 1H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

JKramer

Authorized for release by:
5/16/2022 11:38:26 AM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Laboratory Job ID: 880-14488-1

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-14488-1
Project/Site: King Cobra 2 State 1H

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Job ID: 880-14488-1
Project/Site: King Cobra 2 State 1H

Job ID: 880-14488-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-14488-1

Receipt
The sample was received on 5/6/2022 10:35 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8015MOD_NM: The method blank for preparation batch 880-24993 and analytical batch 880-25019 contained <AffectedAnalytes> above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-24971 and analytical batch 880-25317 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Ensolum
Job ID: 880-14488-1
Project/Site: King Cobra 2 State 1H

Client Sample ID: SS02
Lab Sample ID: 880-14488-1
Date Collected: 05/04/22 14:51
Matrix: Solid
Date Received: 05/06/22 10:35
Sample Depth: 0.3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000387	U	0.00201	0.000387	mg/Kg		05/11/22 09:22	05/13/22 18:51	1
Toluene	<0.000458	U	0.00201	0.000458	mg/Kg		05/11/22 09:22	05/13/22 18:51	1
Ethylbenzene	<0.000567	U	0.00201	0.000567	mg/Kg		05/11/22 09:22	05/13/22 18:51	1
m-Xylene & p-Xylene	<0.00101	U	0.00402	0.00101	mg/Kg		05/11/22 09:22	05/13/22 18:51	1
o-Xylene	<0.000345	U	0.00201	0.000345	mg/Kg		05/11/22 09:22	05/13/22 18:51	1
Xylenes, Total	<0.00101	U	0.00402	0.00101	mg/Kg		05/11/22 09:22	05/13/22 18:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*05/11/22 09:22*	*05/13/22 18:51*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/11/22 09:22*	*05/13/22 18:51*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00402	0.00101	mg/Kg			05/14/22 16:04	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**28.8**	**J**	49.9	15.0	mg/Kg			05/09/22 13:49	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	49.9	15.0	mg/Kg		05/06/22 14:42	05/07/22 20:31	1
Diesel Range Organics (Over C10-C28)	**28.8**	**J B**	49.9	15.0	mg/Kg		05/06/22 14:42	05/07/22 20:31	1
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		05/06/22 14:42	05/07/22 20:31	1
Total TPH	**28.8**	**J B**	49.9	15.0	mg/Kg		05/06/22 14:42	05/07/22 20:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*81*		*70 - 130*	*05/06/22 14:42*	*05/07/22 20:31*	*1*
o-Terphenyl	*85*		*70 - 130*	*05/06/22 14:42*	*05/07/22 20:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**494**	**F1**	5.05	0.867	mg/Kg			05/11/22 13:53	1

Surrogate Summary

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14488-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-14488-1	SS02	101	95
880-14491-A-1-E MS	Matrix Spike	109	104
880-14491-A-1-F MSD	Matrix Spike Duplicate	87	99
LCS 880-25310/1-A	Lab Control Sample	95	101
LCSD 880-25310/2-A	Lab Control Sample Dup	96	107
MB 880-25310/5-A	Method Blank	74	96

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-14444-A-10-C MS	Matrix Spike	80	72
880-14444-A-10-D MSD	Matrix Spike Duplicate	86	76
880-14488-1	SS02	81	85
LCS 880-24993/2-A	Lab Control Sample	85	84
LCSD 880-24993/3-A	Lab Control Sample Dup	80	78
MB 880-24993/1-A	Method Blank	92	106

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14488-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-25310/5-A
Matrix: Solid
Analysis Batch: 25497

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25310

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		05/11/22 09:22	05/13/22 11:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*05/11/22 09:22*	*05/13/22 11:47*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/11/22 09:22*	*05/13/22 11:47*	*1*

Lab Sample ID: LCS 880-25310/1-A
Matrix: Solid
Analysis Batch: 25497

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25310

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1103		mg/Kg		110	70 - 130		
Toluene			0.100	0.1036		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.09909		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.1991		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.09989		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-25310/2-A
Matrix: Solid
Analysis Batch: 25497

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25310

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1099		mg/Kg		110	70 - 130	0	35
Toluene			0.100	0.1003		mg/Kg		100	70 - 130	3	35
Ethylbenzene			0.100	0.1019		mg/Kg		102	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.2070		mg/Kg		103	70 - 130	4	35
o-Xylene			0.100	0.09990		mg/Kg		100	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14488-1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-24993/1-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24993

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1
Diesel Range Organics (Over C10-C28)	20.58	J	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1
OII Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1
Total TPH	20.58	J	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*05/06/22 14:42*	*05/07/22 12:08*	*1*
o-Terphenyl	*106*		*70 - 130*	*05/06/22 14:42*	*05/07/22 12:08*	*1*

Lab Sample ID: LCS 880-24993/2-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24993

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	960.1		mg/Kg		96	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	873.5		mg/Kg		87	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*85*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: LCSD 880-24993/3-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 24993

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	956.9		mg/Kg		96	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	803.7		mg/Kg		80	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*80*		*70 - 130*
o-Terphenyl	*78*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-24971/1-A
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.858	U	5.00	0.858	mg/Kg			05/11/22 10:12	1

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14488-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-24971/2-A
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	247.0		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-24971/3-A
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	245.4		mg/Kg		98	90 - 110	1	20

Lab Sample ID: 880-14488-1 MS
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: SS02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	494	F1	253	699.5	F1	mg/Kg		81	90 - 110		

Lab Sample ID: 880-14488-1 MSD
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: SS02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	494	F1	253	702.7	F1	mg/Kg		83	90 - 110	0	20

QC Association Summary

Client: Ensolum
Job ID: 880-14488-1
Project/Site: King Cobra 2 State 1H

GC VOA

Prep Batch: 25310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14488-1	SS02	Total/NA	Solid	5035	
MB 880-25310/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25310/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25310/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 25497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14488-1	SS02	Total/NA	Solid	8021B	25310
MB 880-25310/5-A	Method Blank	Total/NA	Solid	8021B	25310
LCS 880-25310/1-A	Lab Control Sample	Total/NA	Solid	8021B	25310
LCSD 880-25310/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25310

Analysis Batch: 25568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14488-1	SS02	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 24993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14488-1	SS02	Total/NA	Solid	8015NM Prep	
MB 880-24993/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-24993/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-24993/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 25019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14488-1	SS02	Total/NA	Solid	8015B NM	24993
MB 880-24993/1-A	Method Blank	Total/NA	Solid	8015B NM	24993
LCS 880-24993/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	24993
LCSD 880-24993/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	24993

Analysis Batch: 25119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14488-1	SS02	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 24971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14488-1	SS02	Soluble	Solid	DI Leach	
MB 880-24971/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-24971/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-24971/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-14488-1 MS	SS02	Soluble	Solid	DI Leach	
880-14488-1 MSD	SS02	Soluble	Solid	DI Leach	

Analysis Batch: 25317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14488-1	SS02	Soluble	Solid	300.0	24971
MB 880-24971/1-A	Method Blank	Soluble	Solid	300.0	24971
LCS 880-24971/2-A	Lab Control Sample	Soluble	Solid	300.0	24971

QC Association Summary

Client: Ensolum
Job ID: 880-14488-1
Project/Site: King Cobra 2 State 1H

HPLC/IC (Continued)

Analysis Batch: 25317 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-24971/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	24971
880-14488-1 MS	SS02	Soluble	Solid	300.0	24971
880-14488-1 MSD	SS02	Soluble	Solid	300.0	24971

Lab Chronicle

Client: Ensolum
Job ID: 880-14488-1
Project/Site: King Cobra 2 State 1H

Client Sample ID: SS02
Lab Sample ID: 880-14488-1
Date Collected: 05/04/22 14:51
Matrix: Solid
Date Received: 05/06/22 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			25310	05/11/22 09:22	MR	XEN MID
Total/NA	Analysis	8021B		1	25497	05/13/22 18:51	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	25568	05/14/22 16:04	MR	XEN MID
Total/NA	Analysis	8015 NM		1	25119	05/09/22 13:49	AJ	XEN MID
Total/NA	Prep	8015NM Prep			24993	05/06/22 14:42	DM	XEN MID
Total/NA	Analysis	8015B NM		1	25019	05/07/22 20:31	AJ	XEN MID
Soluble	Leach	DI Leach			24971	05/06/22 16:02	SC	XEN MID
Soluble	Analysis	300.0		1	25317	05/11/22 13:53	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum Job ID: 880-14488-1
Project/Site: King Cobra 2 State 1H

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
8015B NM	8015NM Prep	Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum Job ID: 880-14488-1
Project/Site: King Cobra 2 State 1H

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum

Job ID: 880-14488-1

Project/Site: King Cobra 2 State 1H

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-14488-1	SS02	Solid	05/04/22 14:51	05/06/22 10:35	0.3

Chain of Custody

Work Order No: 14488

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
Midland TX (432) 704-5440 EL Paso TX (915) 585-3443 Lubbock, TX (806) 794-1296
Hobbs NM (575) 392 7550 Carlsbad NM (575) 988-3199 Phoenix AZ (480) 355-0900
Tampa FL (813) 620-2000 Tallahassee FL (850) 756-0747 Delray Beach FL (561) 689-6701
Atlanta GA (770) 449-8800
www.xenco.com

Project Manager	Kalei Jennings	Bill to (if different)	Kalei Jennings
Company Name	Ensolum	Company Name	
Address		Address	
City, State ZIP		City State ZIP	
Phone	817-683-2503	Email	kjennings@ensolum.com

Work Order Comments

Program UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project.
Reporting Level I ☒ Level II ☐ PST/US ☐ TRRP ☐ Level IV ☐
Deliverables EDD ☒ ADaPT ☐ Other

Project Name	King Cobra 2 State 1H	Turn Around	
Project Number		Routine	☒
Project Location		Rush	☐
Sampler's Name	Hadlie Green	Due Date	5DAY
PO #:			

SAMPLE RECEIPT			
Temp Blank	Yes (No)	Wet Ice	(Yes) No
Temperature (°C)	4.2/4.0	Thermometer ID	IR8
Received Intact:	(Yes) No		
Cooler Custody Seals	Yes No (N/A)	Correction Factor	-.2
Sample Custody Seals	Yes No (N/A)	Total Containers	

ANALYSIS REQUEST

Preservative Codes

HNO3 HN
H2S04 H2
HCL HL
None NO
NaOH Na
MeOH Me
Zn Acetate+ NaOH Zn

TAT starts the day recevied by the lab if received by 4.30pm

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	TPH 8015	BTEX 8021	CHLORIDES 300	Sample Comments
SS02	SL	5-4-22	1451	0.3	1	X	X	X	

880-14488 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** Hg

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
1			2		
3		5/6/22 10:35	4		
5			6		

Revised Date101419 Rev 2019 1

Login Sample Receipt Checklist

Client: Ensolum Job Number: 880-14488-1

Login Number: 14488 **List Source: Eurofins Midland**
List Number: 1
Creator: Rodriguez, Leticia

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-14489-1
Client Project/Site: King Cobra 2 State 1H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

JKramer

Authorized for release by:
5/16/2022 11:38:56 AM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Laboratory Job ID: 880-14489-1

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-14489-1
Project/Site: King Cobra 2 State 1H

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Job ID: 880-14489-1
Project/Site: King Cobra 2 State 1H

Job ID: 880-14489-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-14489-1

Receipt
The sample was received on 5/6/2022 10:35 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8015MOD_NM: The method blank for preparation batch 880-24993 and analytical batch 880-25019 contained <AffectedAnalytes> above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-24971 and analytical batch 880-25317 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Ensolum
Job ID: 880-14489-1
Project/Site: King Cobra 2 State 1H

Client Sample ID: SS03
Lab Sample ID: 880-14489-1
Date Collected: 05/04/22 14:56
Matrix: Solid
Date Received: 05/06/22 10:35
Sample Depth: 0.3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000389	U	0.00202	0.000389	mg/Kg		05/11/22 09:22	05/13/22 19:17	1
Toluene	<0.000461	U	0.00202	0.000461	mg/Kg		05/11/22 09:22	05/13/22 19:17	1
Ethylbenzene	<0.000571	U	0.00202	0.000571	mg/Kg		05/11/22 09:22	05/13/22 19:17	1
m-Xylene & p-Xylene	<0.00102	U	0.00404	0.00102	mg/Kg		05/11/22 09:22	05/13/22 19:17	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg		05/11/22 09:22	05/13/22 19:17	1
Xylenes, Total	<0.00102	U	0.00404	0.00102	mg/Kg		05/11/22 09:22	05/13/22 19:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*05/11/22 09:22*	*05/13/22 19:17*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/11/22 09:22*	*05/13/22 19:17*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00404	0.00102	mg/Kg			05/14/22 16:04	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**26.0**	**J**	49.9	15.0	mg/Kg			05/09/22 13:49	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	49.9	15.0	mg/Kg		05/06/22 14:42	05/07/22 20:53	1
Diesel Range Organics (Over C10-C28)	**26.0**	**J B**	49.9	15.0	mg/Kg		05/06/22 14:42	05/07/22 20:53	1
Oil Range Organics (Over C28-C36)	<15.0	U	49.9	15.0	mg/Kg		05/06/22 14:42	05/07/22 20:53	1
Total TPH	**26.0**	**J B**	49.9	15.0	mg/Kg		05/06/22 14:42	05/07/22 20:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*05/06/22 14:42*	*05/07/22 20:53*	*1*
o-Terphenyl	*92*		*70 - 130*	*05/06/22 14:42*	*05/07/22 20:53*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**92.5**		5.01	0.860	mg/Kg			05/11/22 14:21	1

Surrogate Summary

Client: Ensolum
Job ID: 880-14489-1
Project/Site: King Cobra 2 State 1H

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-14489-1	SS03	99	96
880-14491-A-1-E MS	Matrix Spike	109	104
880-14491-A-1-F MSD	Matrix Spike Duplicate	87	99
LCS 880-25310/1-A	Lab Control Sample	95	101
LCSD 880-25310/2-A	Lab Control Sample Dup	96	107
MB 880-25310/5-A	Method Blank	74	96

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-14444-A-10-C MS	Matrix Spike	80	72
880-14444-A-10-D MSD	Matrix Spike Duplicate	86	76
880-14489-1	SS03	90	92
LCS 880-24993/2-A	Lab Control Sample	85	84
LCSD 880-24993/3-A	Lab Control Sample Dup	80	78
MB 880-24993/1-A	Method Blank	92	106

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14489-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-25310/5-A
Matrix: Solid
Analysis Batch: 25497

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25310

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		05/11/22 09:22	05/13/22 11:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*05/11/22 09:22*	*05/13/22 11:47*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/11/22 09:22*	*05/13/22 11:47*	*1*

Lab Sample ID: LCS 880-25310/1-A
Matrix: Solid
Analysis Batch: 25497

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25310

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1103		mg/Kg		110	70 - 130		
Toluene			0.100	0.1036		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.09909		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.1991		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.09989		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-25310/2-A
Matrix: Solid
Analysis Batch: 25497

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25310

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1099		mg/Kg		110	70 - 130	0	35
Toluene			0.100	0.1003		mg/Kg		100	70 - 130	3	35
Ethylbenzene			0.100	0.1019		mg/Kg		102	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.2070		mg/Kg		103	70 - 130	4	35
o-Xylene			0.100	0.09990		mg/Kg		100	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

QC Sample Results

Client: Ensolum
Job ID: 880-14489-1
Project/Site: King Cobra 2 State 1H

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-24993/1-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24993

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1
Diesel Range Organics (Over C10-C28)	20.58	J	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1
OII Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1
Total TPH	20.58	J	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*05/06/22 14:42*	*05/07/22 12:08*	*1*
o-Terphenyl	*106*		*70 - 130*	*05/06/22 14:42*	*05/07/22 12:08*	*1*

Lab Sample ID: LCS 880-24993/2-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24993

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	960.1		mg/Kg		96	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	873.5		mg/Kg		87	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*85*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: LCSD 880-24993/3-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 24993

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	956.9		mg/Kg		96	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	803.7		mg/Kg		80	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*80*		*70 - 130*
o-Terphenyl	*78*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-24971/1-A
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.858	U	5.00	0.858	mg/Kg			05/11/22 10:12	1

QC Sample Results

Client: Ensolum
Job ID: 880-14489-1
Project/Site: King Cobra 2 State 1H

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-24971/2-A
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	247.0		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-24971/3-A
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	245.4		mg/Kg		98	90 - 110	1	20

QC Association Summary

Client: Ensolum
Job ID: 880-14489-1
Project/Site: King Cobra 2 State 1H

GC VOA

Prep Batch: 25310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14489-1	SS03	Total/NA	Solid	5035	
MB 880-25310/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25310/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25310/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 25497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14489-1	SS03	Total/NA	Solid	8021B	25310
MB 880-25310/5-A	Method Blank	Total/NA	Solid	8021B	25310
LCS 880-25310/1-A	Lab Control Sample	Total/NA	Solid	8021B	25310
LCSD 880-25310/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25310

Analysis Batch: 25569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14489-1	SS03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 24993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14489-1	SS03	Total/NA	Solid	8015NM Prep	
MB 880-24993/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-24993/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-24993/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 25019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14489-1	SS03	Total/NA	Solid	8015B NM	24993
MB 880-24993/1-A	Method Blank	Total/NA	Solid	8015B NM	24993
LCS 880-24993/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	24993
LCSD 880-24993/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	24993

Analysis Batch: 25120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14489-1	SS03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 24971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14489-1	SS03	Soluble	Solid	DI Leach	
MB 880-24971/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-24971/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-24971/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 25317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14489-1	SS03	Soluble	Solid	300.0	24971
MB 880-24971/1-A	Method Blank	Soluble	Solid	300.0	24971
LCS 880-24971/2-A	Lab Control Sample	Soluble	Solid	300.0	24971
LCSD 880-24971/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	24971

Lab Chronicle

Client: Ensolum
Job ID: 880-14489-1
Project/Site: King Cobra 2 State 1H

Client Sample ID: SS03
Lab Sample ID: 880-14489-1
Date Collected: 05/04/22 14:56
Matrix: Solid
Date Received: 05/06/22 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			25310	05/11/22 09:22	MR	XEN MID
Total/NA	Analysis	8021B		1	25497	05/13/22 19:17	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	25569	05/14/22 16:04	MR	XEN MID
Total/NA	Analysis	8015 NM		1	25120	05/09/22 13:49	AJ	XEN MID
Total/NA	Prep	8015NM Prep			24993	05/06/22 14:42	DM	XEN MID
Total/NA	Analysis	8015B NM		1	25019	05/07/22 20:53	AJ	XEN MID
Soluble	Leach	DI Leach			24971	05/06/22 16:02	SC	XEN MID
Soluble	Analysis	300.0		1	25317	05/11/22 14:21	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum Job ID: 880-14489-1
Project/Site: King Cobra 2 State 1H

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
8015B NM	8015NM Prep	Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum Job ID: 880-14489-1
Project/Site: King Cobra 2 State 1H

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum

Job ID: 880-14489-1

Project/Site: King Cobra 2 State 1H

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-14489-1	SS03	Solid	05/04/22 14:56	05/06/22 10:35	0.3

Chain of Custody

XENCO LABORATORIES

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
Midland TX (432) 704-5440 EL Paso TX (915) 585-3443 Lubbock, TX (806) 794-1296
Hobbs NM (575) 392 7550 Carlsbad NM (575) 988-3199 Phoenix, AZ (480) 355-0900
Tampa FL (813) 620-2000 Tallahassee FL (850) 756-0747 Delray Beach FL (561) 689-6701
Atlanta GA (770) 449-8800

Work Order No: 14489

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Project Manager	Kalei Jennings	Bill to (if different)	Kalei Jennings
Company Name	Ensolum	Company Name	
Address		Address	
City State ZIP		City State ZIP	
Phone	917-693-7503	Email	kjennings@ensolum.com

Work Order Comments

Program UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project.
Reporting Level II ☒ Level II ☐ PST/US ☐ TRRP ☐ Level IV ☐
Deliverables EDD ☒ ADaPT ☐ Other

Project Name	King Cobra 2 State 1H	Turn Around	
Project Number		Routine ☐	
Project Location		Rush ☐	
Sampler's Name	Hadlii Green	Due Date	
PO #			

SAMPLE RECEIPT			
Temp Blank	Yes (No)	Wet Ice	(Yes) No
Temperature (°C)	4.2/4.0	Thermometer ID	IR8
Received Intact:	(Yes) No		
Cooler Custody Seals	Yes No (N/A)	Correction Factor	-0.2
Sample Custody Seals.	Yes No (N/A)	Total Containers	

ANALYSIS REQUEST

Preservative Codes

HNO3 HN
H2S04 H2
HCL HL
None NO
NaOH Na
MeOH Me
Zn Acetate+ NaOH Zn

TAT starts the day recevied by the lab if received by 4 30pm

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	TPH 8015	BTEX 8021	CHLORIDES 300	Sample Comments
SS03	SL	5-4-22	1456	0.3	1	X	X	X	

880-14489 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors It assigns standard terms and conditions of service Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
1 Hadlii Green		5/6/22 10:35	2		
3			4		
5			6		

Revised Date101419 Rev 2019.1

Login Sample Receipt Checklist

Client: Ensolum Job Number: 880-14489-1

Login Number: 14489 **List Source: Eurofins Midland**
List Number: 1
Creator: Rodriguez, Leticia

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-14490-1
Client Project/Site: King Cobra 2 State 1H

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

JKramer

Authorized for release by:
5/16/2022 11:43:39 AM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Laboratory Job ID: 880-14490-1

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-14490-1
Project/Site: King Cobra 2 State 1H

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14490-1

Job ID: 880-14490-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-14490-1

Receipt
The sample was received on 5/6/2022 10:35 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8015MOD_NM: The method blank for preparation batch 880-24993 and analytical batch 880-25019 contained <AffectedAnalytes> above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-24971 and analytical batch 880-25317 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Ensolum
Job ID: 880-14490-1
Project/Site: King Cobra 2 State 1H

Client Sample ID: SS04
Lab Sample ID: 880-14490-1
Date Collected: 05/04/22 14:59
Matrix: Solid
Date Received: 05/06/22 10:35
Sample Depth: 0.3

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000386	U	0.00200	0.000386	mg/Kg		05/11/22 09:22	05/13/22 19:43	1
Toluene	<0.000457	U	0.00200	0.000457	mg/Kg		05/11/22 09:22	05/13/22 19:43	1
Ethylbenzene	<0.000566	U	0.00200	0.000566	mg/Kg		05/11/22 09:22	05/13/22 19:43	1
m-Xylene & p-Xylene	<0.00101	U	0.00401	0.00101	mg/Kg		05/11/22 09:22	05/13/22 19:43	1
o-Xylene	<0.000345	U	0.00200	0.000345	mg/Kg		05/11/22 09:22	05/13/22 19:43	1
Xylenes, Total	<0.00101	U	0.00401	0.00101	mg/Kg		05/11/22 09:22	05/13/22 19:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*05/11/22 09:22*	*05/13/22 19:43*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*05/11/22 09:22*	*05/13/22 19:43*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00101	U	0.00401	0.00101	mg/Kg			05/14/22 16:04	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**26.3**	**J**	49.8	14.9	mg/Kg			05/09/22 13:49	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<14.9	U	49.8	14.9	mg/Kg		05/06/22 14:42	05/07/22 21:15	1
Diesel Range Organics (Over C10-C28)	**26.3**	**J B**	49.8	14.9	mg/Kg		05/06/22 14:42	05/07/22 21:15	1
OII Range Organics (Over C28-C36)	<14.9	U	49.8	14.9	mg/Kg		05/06/22 14:42	05/07/22 21:15	1
Total TPH	**26.3**	**J B**	49.8	14.9	mg/Kg		05/06/22 14:42	05/07/22 21:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*05/06/22 14:42*	*05/07/22 21:15*	*1*
o-Terphenyl	*88*		*70 - 130*	*05/06/22 14:42*	*05/07/22 21:15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**80.1**		4.99	0.857	mg/Kg			05/11/22 14:30	1

Surrogate Summary

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14490-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-14490-1	SS04	99	101
880-14491-A-1-E MS	Matrix Spike	109	104
880-14491-A-1-F MSD	Matrix Spike Duplicate	87	99
LCS 880-25310/1-A	Lab Control Sample	95	101
LCSD 880-25310/2-A	Lab Control Sample Dup	96	107
MB 880-25310/5-A	Method Blank	74	96

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-14444-A-10-C MS	Matrix Spike	80	72
880-14444-A-10-D MSD	Matrix Spike Duplicate	86	76
880-14490-1	SS04	87	88
LCS 880-24993/2-A	Lab Control Sample	85	84
LCSD 880-24993/3-A	Lab Control Sample Dup	80	78
MB 880-24993/1-A	Method Blank	92	106

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14490-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-25310/5-A
Matrix: Solid
Analysis Batch: 25497

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25310

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		05/11/22 09:22	05/13/22 11:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*05/11/22 09:22*	*05/13/22 11:47*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/11/22 09:22*	*05/13/22 11:47*	*1*

Lab Sample ID: LCS 880-25310/1-A
Matrix: Solid
Analysis Batch: 25497

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25310

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1103		mg/Kg		110	70 - 130		
Toluene			0.100	0.1036		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.09909		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.1991		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.09989		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-25310/2-A
Matrix: Solid
Analysis Batch: 25497

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25310

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1099		mg/Kg		110	70 - 130	0	35
Toluene			0.100	0.1003		mg/Kg		100	70 - 130	3	35
Ethylbenzene			0.100	0.1019		mg/Kg		102	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.2070		mg/Kg		103	70 - 130	4	35
o-Xylene			0.100	0.09990		mg/Kg		100	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14490-1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-24993/1-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24993

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1
Diesel Range Organics (Over C10-C28)	20.58	J	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1
OII Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1
Total TPH	20.58	J	50.0	15.0	mg/Kg		05/06/22 14:42	05/07/22 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*05/06/22 14:42*	*05/07/22 12:08*	*1*
o-Terphenyl	*106*		*70 - 130*	*05/06/22 14:42*	*05/07/22 12:08*	*1*

Lab Sample ID: LCS 880-24993/2-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24993

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	960.1		mg/Kg		96	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	873.5		mg/Kg		87	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*85*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: LCSD 880-24993/3-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 24993

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	956.9		mg/Kg		96	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	803.7		mg/Kg		80	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*80*		*70 - 130*
o-Terphenyl	*78*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-24971/1-A
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.858	U	5.00	0.858	mg/Kg			05/11/22 10:12	1

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14490-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-24971/2-A
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	247.0		mg/Kg		99	90 - 110

Lab Sample ID: LCSD 880-24971/3-A
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	245.4		mg/Kg		98	90 - 110	1	20

QC Association Summary

Client: Ensolum
Job ID: 880-14490-1
Project/Site: King Cobra 2 State 1H

GC VOA

Prep Batch: 25310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14490-1	SS04	Total/NA	Solid	5035	
MB 880-25310/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25310/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25310/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 25497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14490-1	SS04	Total/NA	Solid	8021B	25310
MB 880-25310/5-A	Method Blank	Total/NA	Solid	8021B	25310
LCS 880-25310/1-A	Lab Control Sample	Total/NA	Solid	8021B	25310
LCSD 880-25310/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25310

Analysis Batch: 25570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14490-1	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 24993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14490-1	SS04	Total/NA	Solid	8015NM Prep	
MB 880-24993/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-24993/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-24993/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 25019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14490-1	SS04	Total/NA	Solid	8015B NM	24993
MB 880-24993/1-A	Method Blank	Total/NA	Solid	8015B NM	24993
LCS 880-24993/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	24993
LCSD 880-24993/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	24993

Analysis Batch: 25121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14490-1	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 24971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14490-1	SS04	Soluble	Solid	DI Leach	
MB 880-24971/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-24971/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-24971/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 25317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14490-1	SS04	Soluble	Solid	300.0	24971
MB 880-24971/1-A	Method Blank	Soluble	Solid	300.0	24971
LCS 880-24971/2-A	Lab Control Sample	Soluble	Solid	300.0	24971
LCSD 880-24971/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	24971

Lab Chronicle

Client: Ensolum
Job ID: 880-14490-1
Project/Site: King Cobra 2 State 1H

Client Sample ID: SS04
Lab Sample ID: 880-14490-1
Date Collected: 05/04/22 14:59
Matrix: Solid
Date Received: 05/06/22 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			25310	05/11/22 09:22	MR	XEN MID
Total/NA	Analysis	8021B		1	25497	05/13/22 19:43	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	25570	05/14/22 16:04	MR	XEN MID
Total/NA	Analysis	8015 NM		1	25121	05/09/22 13:49	AJ	XEN MID
Total/NA	Prep	8015NM Prep			24993	05/06/22 14:42	DM	XEN MID
Total/NA	Analysis	8015B NM		1	25019	05/07/22 21:15	AJ	XEN MID
Soluble	Leach	DI Leach			24971	05/06/22 16:02	SC	XEN MID
Soluble	Analysis	300.0		1	25317	05/11/22 14:30	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum Job ID: 880-14490-1
Project/Site: King Cobra 2 State 1H

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
8015B NM	8015NM Prep	Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum Job ID: 880-14490-1
Project/Site: King Cobra 2 State 1H

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum

Job ID: 880-14490-1

Project/Site: King Cobra 2 State 1H

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-14490-1	SS04	Solid	05/04/22 14:59	05/06/22 10:35	0.3

XENCO LABORATORIES

Chain of Custody

Work Order No: 14490

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
Midland TX (432) 704-5440 EL Paso TX (915) 585-3443 Lubbock TX (806) 794-1296
Hobbs NM (575) 392 7550 Carlsbad NM (575) 988-3199 Phoenix, AZ (480) 355-0900
Tampa FL (813) 620-2000 Tallahassee FL (850) 756-0747 Delray Beach FL (561) 689-6701
Atlanta GA (770) 449-8800

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Project Manager	Kalei Jennings	Bill to (if different)	Kalei Jennings
Company Name	Ensolum	Company Name	
Address		Address	
City State ZIP		City State ZIP	
Phone	817-683-2503	Email	Kjennings@ensolum.com

Work Order Comments

Program UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project
Reporting Level I ☒ Level II ☐ PST/US ☐ TRRP ☐ Level IV ☐
Deliverables EDD ☒ ADaPT ☐ Other

Project Name	King Cobra 2 State 1H	Turn Around	
Project Number		Routine	☒
Project Location		Rush	☐
Sampler's Name	Hadlie Green	Due Date	SDAY
PO #			

SAMPLE RECEIPT			
Temp Blank	Yes (No)	Wet Ice	(Yes) No
Temperature (°C)	4.2/4.0	Thermometer ID	IR8
Received Intact	(Yes) No		
Cooler Custody Seals	Yes No (N/A)	Correction Factor	-.2
Sample Custody Seals	Yes No (N/A)	Total Containers	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	TPH 8015	BTEX 8021	CHLORIDES 300
SS04	SL	5-4-22	1459	0.3	1	X	X	X

Preservative Codes

HNO3 HN
H2S04 H2
HCL HL
None NO
NaOH Na
MeOH Me
Zn Acetate+ NaOH Zn

TAT starts the day recevied by the lab if received by 4 30pm

Sample Comments

880-14490 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by (Signature)	Received by: (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
1 Hadlie Green		5/6/22 10:35	2		
3			4		
5			6		

Revised Date101419 Rev 2019 1

Login Sample Receipt Checklist

Client: Ensolum Job Number: 880-14490-1

Login Number: 14490 **List Source: Eurofins Midland**
List Number: 1
Creator: Rodriguez, Leticia

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-14493-1
Client Project/Site: King Cobra 2 State 1H
Revision: 1

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

JKramer

Authorized for release by:
5/24/2022 12:29:10 PM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Laboratory Job ID: 880-14493-1

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 880-14493-1
Project/Site: King Cobra 2 State 1H

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14493-1

Job ID: 880-14493-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-14493-1

REVISION

The report being provided is a revision of the original report sent on 5/17/2022. The report (revision 1) is being revised due to Per client email, requesting TPH re run on sample #2.

Report revision history

Receipt
The samples were received on 5/6/2022 10:35 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8015MOD_NM: The method blank for preparation batch 880-25005 and analytical batch 880-25019 contained Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-25829 and analytical batch 880-25770 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-24971 and analytical batch 880-25317 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14493-1

Client Sample ID: FS01

Date Collected: 05/04/22 14:00
Date Received: 05/06/22 10:35
Sample Depth: 0.5

Lab Sample ID: 880-14493-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000389	U	0.00202	0.000389	mg/Kg		05/11/22 09:22	05/13/22 21:01	1
Toluene	<0.000461	U	0.00202	0.000461	mg/Kg		05/11/22 09:22	05/13/22 21:01	1
Ethylbenzene	<0.000571	U	0.00202	0.000571	mg/Kg		05/11/22 09:22	05/13/22 21:01	1
m-Xylene & p-Xylene	<0.00102	U	0.00404	0.00102	mg/Kg		05/11/22 09:22	05/13/22 21:01	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg		05/11/22 09:22	05/13/22 21:01	1
Xylenes, Total	<0.00102	U	0.00404	0.00102	mg/Kg		05/11/22 09:22	05/13/22 21:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*05/11/22 09:22*	*05/13/22 21:01*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*05/11/22 09:22*	*05/13/22 21:01*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00404	0.00102	mg/Kg			05/14/22 16:04	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**90.6**		50.0	15.0	mg/Kg			05/09/22 13:49	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		05/06/22 17:12	05/07/22 23:03	1
Diesel Range Organics (Over C10-C28)	**90.6**	**B**	50.0	15.0	mg/Kg		05/06/22 17:12	05/07/22 23:03	1
OII Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		05/06/22 17:12	05/07/22 23:03	1
Total TPH	**90.6**	**B**	50.0	15.0	mg/Kg		05/06/22 17:12	05/07/22 23:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*05/06/22 17:12*	*05/07/22 23:03*	*1*
o-Terphenyl	*98*		*70 - 130*	*05/06/22 17:12*	*05/07/22 23:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**124**		4.95	0.850	mg/Kg			05/11/22 15:44	1

Client Sample ID: FS02

Date Collected: 05/04/22 14:11
Date Received: 05/06/22 10:35
Sample Depth: 0.5

Lab Sample ID: 880-14493-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000387	U	0.00201	0.000387	mg/Kg		05/11/22 09:22	05/13/22 21:27	1
Toluene	<0.000459	U	0.00201	0.000459	mg/Kg		05/11/22 09:22	05/13/22 21:27	1
Ethylbenzene	<0.000568	U	0.00201	0.000568	mg/Kg		05/11/22 09:22	05/13/22 21:27	1
m-Xylene & p-Xylene	<0.00102	U	0.00402	0.00102	mg/Kg		05/11/22 09:22	05/13/22 21:27	1
o-Xylene	<0.000346	U	0.00201	0.000346	mg/Kg		05/11/22 09:22	05/13/22 21:27	1
Xylenes, Total	<0.00102	U	0.00402	0.00102	mg/Kg		05/11/22 09:22	05/13/22 21:27	1

Client Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14493-1

Client Sample ID: FS02

Date Collected: 05/04/22 14:11
Date Received: 05/06/22 10:35
Sample Depth: 0.5

Lab Sample ID: 880-14493-2
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/11/22 09:22*	*05/13/22 21:27*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/11/22 09:22*	*05/13/22 21:27*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00402	0.00102	mg/Kg			05/14/22 16:04	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**96**		50.0	15.0	mg/Kg			05/09/22 13:49	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**26.5**	**J B**	50.0	15.0	mg/Kg		05/18/22 15:06	05/19/22 00:37	1
Diesel Range Organics (Over C10-C28)	**69.1**		50.0	15.0	mg/Kg		05/18/22 15:06	05/19/22 00:37	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		05/18/22 15:06	05/19/22 00:37	1
Total TPH	**96**	**B**	50.0	15.0	mg/Kg		05/18/22 15:06	05/19/22 00:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*102*		*70 - 130*	*05/18/22 15:06*	*05/19/22 00:37*	*1*
o-Terphenyl	*101*		*70 - 130*	*05/18/22 15:06*	*05/19/22 00:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**185**		4.95	0.850	mg/Kg			05/11/22 15:53	1

Client Sample ID: FS03

Date Collected: 05/04/22 14:17
Date Received: 05/06/22 10:35
Sample Depth: 0.5

Lab Sample ID: 880-14493-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000388	U	0.00202	0.000388	mg/Kg		05/15/22 16:33	05/16/22 16:54	1
Toluene	<0.000460	U	0.00202	0.000460	mg/Kg		05/15/22 16:33	05/16/22 16:54	1
Ethylbenzene	<0.000570	U	0.00202	0.000570	mg/Kg		05/15/22 16:33	05/16/22 16:54	1
m-Xylene & p-Xylene	<0.00102	U	0.00403	0.00102	mg/Kg		05/15/22 16:33	05/16/22 16:54	1
o-Xylene	<0.000347	U	0.00202	0.000347	mg/Kg		05/15/22 16:33	05/16/22 16:54	1
Xylenes, Total	<0.00102	U	0.00403	0.00102	mg/Kg		05/15/22 16:33	05/16/22 16:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*05/15/22 16:33*	*05/16/22 16:54*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/15/22 16:33*	*05/16/22 16:54*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00102	U	0.00403	0.00102	mg/Kg			05/14/22 16:04	1

Client Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14493-1

Client Sample ID: FS03

Date Collected: 05/04/22 14:17
Date Received: 05/06/22 10:35
Sample Depth: 0.5

Lab Sample ID: 880-14493-3

Matrix: Solid

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**33.5**	**J**	50.0	15.0	mg/Kg			05/09/22 13:49	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		05/06/22 17:12	05/08/22 00:23	1
Diesel Range Organics (Over C10-C28)	**33.5**	**J B**	50.0	15.0	mg/Kg		05/06/22 17:12	05/08/22 00:23	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		05/06/22 17:12	05/08/22 00:23	1
Total TPH	**33.5**	**J B**	50.0	15.0	mg/Kg		05/06/22 17:12	05/08/22 00:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/06/22 17:12*	*05/08/22 00:23*	*1*
o-Terphenyl	*100*		*70 - 130*	*05/06/22 17:12*	*05/08/22 00:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.75**		4.96	0.851	mg/Kg			05/11/22 21:45	1

Surrogate Summary

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14493-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-14491-A-1-E MS	Matrix Spike	109	104
880-14491-A-1-F MSD	Matrix Spike Duplicate	87	99
880-14493-1	FS01	101	103
880-14493-2	FS02	109	97
880-14493-3	FS03	111	95
890-2291-A-3-E MS	Matrix Spike	109	93
890-2308-A-1-D MSD	Matrix Spike Duplicate	106	96
LCS 880-25310/1-A	Lab Control Sample	95	101
LCS 880-25578/1-A	Lab Control Sample	105	94
LCS 880-25634/1-A	Lab Control Sample	103	95
LCSD 880-25310/2-A	Lab Control Sample Dup	96	107
LCSD 880-25578/2-A	Lab Control Sample Dup	106	95
LCSD 880-25634/2-A	Lab Control Sample Dup	101	94
MB 880-25310/5-A	Method Blank	74	96
MB 880-25578/5-A	Method Blank	101	93

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-14493-1	FS01	92	98
880-14493-1 MS	FS01	91	87
880-14493-1 MSD	FS01	98	94
880-14493-2	FS02	102	101
880-14493-3	FS03	96	100
890-2316-A-1-G MS	Matrix Spike	104	98
890-2316-A-1-H MSD	Matrix Spike Duplicate	103	94
LCS 880-25005/2-A	Lab Control Sample	82	79
LCS 880-25829/2-A	Lab Control Sample	105	102
LCSD 880-25005/3-A	Lab Control Sample Dup	81	78
LCSD 880-25829/3-A	Lab Control Sample Dup	102	98
MB 880-25005/1-A	Method Blank	84	89
MB 880-25829/1-A	Method Blank	111	118

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14493-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-25310/5-A
Matrix: Solid
Analysis Batch: 25497

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25310

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		05/11/22 09:22	05/13/22 11:47	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		05/11/22 09:22	05/13/22 11:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*05/11/22 09:22*	*05/13/22 11:47*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/11/22 09:22*	*05/13/22 11:47*	*1*

Lab Sample ID: LCS 880-25310/1-A
Matrix: Solid
Analysis Batch: 25497

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25310

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1103		mg/Kg		110	70 - 130		
Toluene			0.100	0.1036		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.09909		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.1991		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.09989		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-25310/2-A
Matrix: Solid
Analysis Batch: 25497

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25310

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1099		mg/Kg		110	70 - 130	0	35
Toluene			0.100	0.1003		mg/Kg		100	70 - 130	3	35
Ethylbenzene			0.100	0.1019		mg/Kg		102	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.2070		mg/Kg		103	70 - 130	4	35
o-Xylene			0.100	0.09990		mg/Kg		100	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: MB 880-25578/5-A
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25578

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000385	U	0.00200	0.000385	mg/Kg		05/15/22 16:33	05/16/22 11:44	1
Toluene	<0.000456	U	0.00200	0.000456	mg/Kg		05/15/22 16:33	05/16/22 11:44	1

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14493-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-25578/5-A
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25578

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.000565	U	0.00200	0.000565	mg/Kg		05/15/22 16:33	05/16/22 11:44	1
m-Xylene & p-Xylene	<0.00101	U	0.00400	0.00101	mg/Kg		05/15/22 16:33	05/16/22 11:44	1
o-Xylene	<0.000344	U	0.00200	0.000344	mg/Kg		05/15/22 16:33	05/16/22 11:44	1
Xylenes, Total	<0.00101	U	0.00400	0.00101	mg/Kg		05/15/22 16:33	05/16/22 11:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*05/15/22 16:33*	*05/16/22 11:44*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/15/22 16:33*	*05/16/22 11:44*	*1*

Lab Sample ID: LCS 880-25578/1-A
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25578

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09547		mg/Kg		95	70 - 130
Toluene	0.100	0.1055		mg/Kg		105	70 - 130
Ethylbenzene	0.100	0.1091		mg/Kg		109	70 - 130
m-Xylene & p-Xylene	0.200	0.2221		mg/Kg		111	70 - 130
o-Xylene	0.100	0.1111		mg/Kg		111	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: LCSD 880-25578/2-A
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25578

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09231		mg/Kg		92	70 - 130	3	35
Toluene	0.100	0.1029		mg/Kg		103	70 - 130	2	35
Ethylbenzene	0.100	0.1056		mg/Kg		106	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.2162		mg/Kg		108	70 - 130	3	35
o-Xylene	0.100	0.1082		mg/Kg		108	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCS 880-25634/1-A
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25634

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09542		mg/Kg		95	70 - 130
Toluene	0.100	0.1003		mg/Kg		100	70 - 130
Ethylbenzene	0.100	0.1024		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	0.200	0.2061		mg/Kg		103	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14493-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCS 880-25634/1-A
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25634

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.1042		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-25634/2-A
Matrix: Solid
Analysis Batch: 25591

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25634

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08697		mg/Kg		87	70 - 130	9	35
Toluene			0.100	0.09254		mg/Kg		93	70 - 130	8	35
Ethylbenzene			0.100	0.09409		mg/Kg		94	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.1904		mg/Kg		95	70 - 130	8	35
o-Xylene			0.100	0.09588		mg/Kg		96	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-25005/1-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25005

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	50.0	15.0	mg/Kg		05/06/22 17:12	05/07/22 21:59	1
Diesel Range Organics (Over C10-C28)	21.79	J	50.0	15.0	mg/Kg		05/06/22 17:12	05/07/22 21:59	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		05/06/22 17:12	05/07/22 21:59	1
Total TPH	21.79	J	50.0	15.0	mg/Kg		05/06/22 17:12	05/07/22 21:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*05/06/22 17:12*	*05/07/22 21:59*	*1*
o-Terphenyl	*89*		*70 - 130*	*05/06/22 17:12*	*05/07/22 21:59*	*1*

Lab Sample ID: LCS 880-25005/2-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25005

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	834.1		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	844.6		mg/Kg		84	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14493-1

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-25005/2-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25005

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	82		70 - 130
o-Terphenyl	79		70 - 130

Lab Sample ID: LCSD 880-25005/3-A
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25005

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	809.6		mg/Kg		81	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	831.1		mg/Kg		83	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	78		70 - 130

Lab Sample ID: 880-14493-1 MS
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 25005

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	1000	839.1		mg/Kg		84	70 - 130
Diesel Range Organics (Over C10-C28)	90.6	B	1000	860.3		mg/Kg		77	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	87		70 - 130

Lab Sample ID: 880-14493-1 MSD
Matrix: Solid
Analysis Batch: 25019

Client Sample ID: FS01
Prep Type: Total/NA
Prep Batch: 25005

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<15.0	U	998	806.6		mg/Kg		81	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	90.6	B	998	923.0		mg/Kg		83	70 - 130	7	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	94		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14493-1

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-25829/1-A
Matrix: Solid
Analysis Batch: 25770

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25829

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	19.53	J	50.0	15.0	mg/Kg		05/18/22 15:06	05/18/22 21:27	1
Diesel Range Organics (Over C10-C28)	<15.0	U	50.0	15.0	mg/Kg		05/18/22 15:06	05/18/22 21:27	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		05/18/22 15:06	05/18/22 21:27	1
Total TPH	19.53	J	50.0	15.0	mg/Kg		05/18/22 15:06	05/18/22 21:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*05/18/22 15:06*	*05/18/22 21:27*	*1*
o-Terphenyl	*118*		*70 - 130*	*05/18/22 15:06*	*05/18/22 21:27*	*1*

Lab Sample ID: LCS 880-25829/2-A
Matrix: Solid
Analysis Batch: 25770

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25829

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	857.6		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	998.7		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*102*		*70 - 130*

Lab Sample ID: LCSD 880-25829/3-A
Matrix: Solid
Analysis Batch: 25770

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25829

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	845.8		mg/Kg		85	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	959.5		mg/Kg		96	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-24971/1-A
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.858	U	5.00	0.858	mg/Kg			05/11/22 10:12	1

QC Sample Results

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14493-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-24971/2-A
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	247.0		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-24971/3-A
Matrix: Solid
Analysis Batch: 25317

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	245.4		mg/Kg		98	90 - 110	1	20

Lab Sample ID: MB 880-25207/1-A
Matrix: Solid
Analysis Batch: 25349

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.858	U	5.00	0.858	mg/Kg			05/11/22 21:21	1

Lab Sample ID: LCS 880-25207/2-A
Matrix: Solid
Analysis Batch: 25349

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	264.2		mg/Kg		106	90 - 110		

Lab Sample ID: LCSD 880-25207/3-A
Matrix: Solid
Analysis Batch: 25349

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	264.6		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 880-14493-3 MS
Matrix: Solid
Analysis Batch: 25349

Client Sample ID: FS03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	9.75		248	270.6		mg/Kg		105	90 - 110		

Lab Sample ID: 880-14493-3 MSD
Matrix: Solid
Analysis Batch: 25349

Client Sample ID: FS03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	9.75		248	264.5		mg/Kg		103	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14493-1

GC VOA

Prep Batch: 25310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14493-1	FS01	Total/NA	Solid	5035	
880-14493-2	FS02	Total/NA	Solid	5035	
MB 880-25310/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25310/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25310/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 25497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14493-1	FS01	Total/NA	Solid	8021B	25310
880-14493-2	FS02	Total/NA	Solid	8021B	25310
MB 880-25310/5-A	Method Blank	Total/NA	Solid	8021B	25310
LCS 880-25310/1-A	Lab Control Sample	Total/NA	Solid	8021B	25310
LCSD 880-25310/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25310

Analysis Batch: 25573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14493-1	FS01	Total/NA	Solid	Total BTEX	
880-14493-2	FS02	Total/NA	Solid	Total BTEX	
880-14493-3	FS03	Total/NA	Solid	Total BTEX	

Prep Batch: 25578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14493-3	FS03	Total/NA	Solid	5035	
MB 880-25578/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25578/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25578/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 25591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14493-3	FS03	Total/NA	Solid	8021B	25578
MB 880-25578/5-A	Method Blank	Total/NA	Solid	8021B	25578
LCS 880-25578/1-A	Lab Control Sample	Total/NA	Solid	8021B	25578
LCS 880-25634/1-A	Lab Control Sample	Total/NA	Solid	8021B	25634
LCSD 880-25578/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25578
LCSD 880-25634/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25634

Prep Batch: 25634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-25634/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25634/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 25005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14493-1	FS01	Total/NA	Solid	8015NM Prep	
880-14493-3	FS03	Total/NA	Solid	8015NM Prep	
MB 880-25005/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-25005/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-25005/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-14493-1 MS	FS01	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14493-1

GC Semi VOA (Continued)

Prep Batch: 25005 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14493-1 MSD	FS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 25019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14493-1	FS01	Total/NA	Solid	8015B NM	25005
880-14493-3	FS03	Total/NA	Solid	8015B NM	25005
MB 880-25005/1-A	Method Blank	Total/NA	Solid	8015B NM	25005
LCS 880-25005/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	25005
LCSD 880-25005/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	25005
880-14493-1 MS	FS01	Total/NA	Solid	8015B NM	25005
880-14493-1 MSD	FS01	Total/NA	Solid	8015B NM	25005

Analysis Batch: 25122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14493-1	FS01	Total/NA	Solid	8015 NM	
880-14493-2	FS02	Total/NA	Solid	8015 NM	
880-14493-3	FS03	Total/NA	Solid	8015 NM	

Analysis Batch: 25770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14493-2	FS02	Total/NA	Solid	8015B NM	25829
MB 880-25829/1-A	Method Blank	Total/NA	Solid	8015B NM	25829
LCS 880-25829/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	25829
LCSD 880-25829/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	25829

Prep Batch: 25829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14493-2	FS02	Total/NA	Solid	8015NM Prep	
MB 880-25829/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-25829/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-25829/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 24971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14493-1	FS01	Soluble	Solid	DI Leach	
880-14493-2	FS02	Soluble	Solid	DI Leach	
MB 880-24971/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-24971/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-24971/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 25207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14493-3	FS03	Soluble	Solid	DI Leach	
MB 880-25207/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-25207/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-25207/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-14493-3 MS	FS03	Soluble	Solid	DI Leach	
880-14493-3 MSD	FS03	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Job ID: 880-14493-1
Project/Site: King Cobra 2 State 1H

HPLC/IC

Analysis Batch: 25317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14493-1	FS01	Soluble	Solid	300.0	24971
880-14493-2	FS02	Soluble	Solid	300.0	24971
MB 880-24971/1-A	Method Blank	Soluble	Solid	300.0	24971
LCS 880-24971/2-A	Lab Control Sample	Soluble	Solid	300.0	24971
LCSD 880-24971/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	24971

Analysis Batch: 25349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14493-3	FS03	Soluble	Solid	300.0	25207
MB 880-25207/1-A	Method Blank	Soluble	Solid	300.0	25207
LCS 880-25207/2-A	Lab Control Sample	Soluble	Solid	300.0	25207
LCSD 880-25207/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	25207
880-14493-3 MS	FS03	Soluble	Solid	300.0	25207
880-14493-3 MSD	FS03	Soluble	Solid	300.0	25207

Lab Chronicle

Client: Ensolum
Job ID: 880-14493-1
Project/Site: King Cobra 2 State 1H

Client Sample ID: FS01
Lab Sample ID: 880-14493-1
Date Collected: 05/04/22 14:00
Matrix: Solid
Date Received: 05/06/22 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			25310	05/11/22 09:22	MR	XEN MID
Total/NA	Analysis	8021B		1	25497	05/13/22 21:01	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	25573	05/14/22 16:04	MR	XEN MID
Total/NA	Analysis	8015 NM		1	25122	05/09/22 13:49	AJ	XEN MID
Total/NA	Prep	8015NM Prep			25005	05/06/22 17:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	25019	05/07/22 23:03	AJ	XEN MID
Soluble	Leach	DI Leach			24971	05/06/22 16:02	SC	XEN MID
Soluble	Analysis	300.0		1	25317	05/11/22 15:44	CH	XEN MID

Client Sample ID: FS02
Lab Sample ID: 880-14493-2
Date Collected: 05/04/22 14:11
Matrix: Solid
Date Received: 05/06/22 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			25310	05/11/22 09:22	MR	XEN MID
Total/NA	Analysis	8021B		1	25497	05/13/22 21:27	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	25573	05/14/22 16:04	MR	XEN MID
Total/NA	Analysis	8015 NM		1	25122	05/09/22 13:49	AJ	XEN MID
Total/NA	Prep	8015NM Prep			25829	05/18/22 15:06	DM	XEN MID
Total/NA	Analysis	8015B NM		1	25770	05/19/22 00:37	AJ	XEN MID
Soluble	Leach	DI Leach			24971	05/06/22 16:02	SC	XEN MID
Soluble	Analysis	300.0		1	25317	05/11/22 15:53	CH	XEN MID

Client Sample ID: FS03
Lab Sample ID: 880-14493-3
Date Collected: 05/04/22 14:17
Matrix: Solid
Date Received: 05/06/22 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			25578	05/15/22 16:33	MR	XEN MID
Total/NA	Analysis	8021B		1	25591	05/16/22 16:54	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	25573	05/14/22 16:04	MR	XEN MID
Total/NA	Analysis	8015 NM		1	25122	05/09/22 13:49	AJ	XEN MID
Total/NA	Prep	8015NM Prep			25005	05/06/22 17:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1	25019	05/08/22 00:23	AJ	XEN MID
Soluble	Leach	DI Leach			25207	05/09/22 16:46	SC	XEN MID
Soluble	Analysis	300.0		1	25349	05/11/22 21:45	CH	XEN MID

Laboratory References:
XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Job ID: 880-14493-1
Project/Site: King Cobra 2 State 1H

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
8015B NM	8015NM Prep	Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14493-1

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum
Project/Site: King Cobra 2 State 1H

Job ID: 880-14493-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-14493-1	FS01	Solid	05/04/22 14:00	05/06/22 10:35	0.5
880-14493-2	FS02	Solid	05/04/22 14:11	05/06/22 10:35	0.5
880-14493-3	FS03	Solid	05/04/22 14:17	05/06/22 10:35	0.5

Chain of Custody

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
Midland TX (432) 704-5440 EL Paso TX (915) 585-3443 Lubbock, TX (806) 794-1296
Hobbs NM (575) 392 7550 Carlsbad NM (575) 988-3199 Phoenix, AZ (480) 355-0900
Tampa FL (813) 620-2000 Tallahassee FL (850) 756-0747 Delray Beach FL (561) 689-6701
Atlanta GA (770) 449-8800

Work Order No: 14493

www xenco com Page 1 of 1

Project Manager	Kalei Jennings	Bill to (if different)	Kalei Jennings
Company Name	Ensolum	Company Name	
Address	601 N Marienfield St, St 400	Address	
City State ZIP	Midland, TX 79701	City, State ZIP	
Phone	817-683-2503 Email		Kjennings@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project
Reporting Level ☒ Level II ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables EDD ☒ ADaPT ☐ Other

Project Name	King Cobra 2 State 1H	Turn Around	
Project Number		Routine	☒
Project Location		Rush	☐
Sampler's Name	Hadlie Green	Due Date	5DAY
PO #			

SAMPLE RECEIPT			
Temp Blank	Yes (No)	Wet Ice	(Yes) No
Temperature (°C)	4.2/4.0	Thermometer ID	IR8
Received Intact:	(Yes) No		
Cooler Custody Seals	Yes No (N/A)	Correction Factor	-.2
Sample Custody Seals	Yes No (N/A)	Total Containers	

ANALYSIS REQUEST

Preservative Codes

HNO3 HN
H2S04 H2
HCL HL
None NO
NaOH Na
MeOH Me
Zn Acetate+ NaOH Zn

TAT starts the day recevied by the lab if received by 4 30pm

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	TPH 8015	BTEX 8021	CHLORIDES 300	Sample Comments
FS01	SL	5-4-22	1400	0.5	1	X	X	X	
FS02	↓	↓	1411	0.5	↓	↓	↓	↓	
FS03	↓	↓	1417	0.5	↓	↓	↓	↓	

880-14493 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** Hg

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
1 Hadlie Green		5/6/22 10:35	2		
3			4		
5			6		

Revised Date101419 Rev 2019.1

Login Sample Receipt Checklist

Client: Ensolum Job Number: 880-14493-1

Login Number: 14493 **List Source: Eurofins Midland**
List Number: 1
Creator: Rodriguez, Leticia

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

ENSOLUM

APPENDIX D

NMOCD Notifications

From: Beauvais, Charles R
To: Kalei Jennings
Subject: FW: [EXTERNAL](Extension Approval) - King Cobra 2 Sate 001H (Incident Number NAPP2205234848)
Date: Friday, May 6, 2022 4:34:19 PM
Attachments: image002.jpg
image003.png

[**EXTERNAL EMAIL**]

FYI

From: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Sent: Friday, May 6, 2022 3:28 PM
To: Beauvais, Charles R <Charles.R.Beauvais@conocophillips.com>; Esparza, Brittany <Brittany.Esparza@conocophillips.com>
Cc: Fejervary Morena, Gustavo A <G.Fejervary@conocophillips.com>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>
Subject: [EXTERNAL](Extension Approval) - King Cobra 2 Sate 001H (Incident Number NAPP2205234848)

RE: Incident #**NAPP2205234848**

Charles,

Your request for an extension to **August 6th, 2022** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Beauvais, Charles R <Charles.R.Beauvais@conocophillips.com>

Sent: Friday, May 6, 2022 2:51 PM
To: EMNRD-OCD-District1spills <EMNRD-OCD-District1spills@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Esparza, Brittany <Brittany.Esparza@conocophillips.com>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Fejervary Morena, Gustavo A <G.Fejervary@conocophillips.com>
Subject: [EXTERNAL] Extension Request 2 - King Cobra 2 Sate 001H (Incident Number NAPP2205234848)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

To Whom It May Concern,

COP is requesting an extension for the current deadline of May 8, 2022 for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC at King Cobra 2 Sate 001H (Incident Number NAPP2205234848). The release was discovered on February 6, 2022 and remediation activities are expected to complete this week. In order to complete remediation activities and allow time to submit a remediation work plan or closure report COP requests a 90-day extension of this deadline until August 6, 2022.

Respectfully,

Charles R. Beauvais **II**
Senior Environmental Engineer **|** Environmental Operations **| ConocoPhillips**
(M) 575-988-2043
Charles.R.Beauvais@conocophillips.com

Our work is never so urgent or important that we cannot take the time to do it safely and in an environmentally responsible manner.

From: Hamlet, Robert, EMNRD
To: Kalei Jennings
Cc: Beauvais, Charles R; Bratcher, Mike, EMNRD; Nobui, Jennifer, EMNRD; Harimon, Jocelyn, EMNRD
Subject: RE: [EXTERNAL] COP - Sampling Notification (Week of 5/2/22 - 5/6/22)
Date: Friday, April 29, 2022 9:06:09 AM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Kalei,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Sent: Thursday, April 28, 2022 1:38 PM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Subject: Fw: [EXTERNAL] COP - Sampling Notification (Week of 5/2/22 - 5/6/22)

From: Kalei Jennings <kjennings@ensolum.com>
Sent: Thursday, April 28, 2022 1:37 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Cc: Beauvais, Charles R <Charles.R.Beauvais@conocophillips.com>
Subject: [EXTERNAL] COP - Sampling Notification (Week of 5/2/22 - 5/6/22)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

ConocoPhillips plans to complete final sampling activities at the following sites the week of May 2, 2022.

Monday:

Tuesday:

Wednesday:

- Pork Pie State Com 704H/ NAPP2204938905
- King Cobra 2 State 001H / NAPP2205234848

Thursday:

- Zia Hills 25E / NAPP2205439117

Friday:

Thank you,

Kalei Jennings
Senior Scientist
817-683-2503
Ensolum, LLC

ENSOLUM

APPENDIX E

Final C-141

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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAPP2205234848
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # *(assigned by OCD)*
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# *(if applicable)*

Unit Letter	Section	Township	Range	County

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2205234848
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☐ The source of the release has been stopped.
☐ The impacted area has been secured to protect human health and the environment.
☐ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☐ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

L48 Spill Volume Estimate Form

Facility Name & Number:	King Cobra 2
Asset Area:	NDBE NAPP2205234848
Release Discovery Date & Time:	2/6/2022 9AM
Release Type:	Other
Provide any known details about the event:	Flare Fire. On-Pad.

Spill Calculation - Subsurface Spill - Rectangle

Was the release on pad or off-pad?	See reference table below
Has it rained at least a half inch in the last 24 hours?	See reference table below

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)
Rectangle A	16.0	10.0	0.01	10.50%	0.024	0.002
Rectangle B	21.0	18.0	0.01	10.50%	0.056	0.006
Rectangle C					0.000	0.000
Rectangle D					0.000	0.000
Rectangle E					0.000	0.000
Rectangle F					0.000	0.000
Rectangle G					0.000	0.000
Rectangle H					0.000	0.000
Rectangle I					0.000	0.000
Rectangle J					0.000	0.000
					Total Volume Release:	0.008

NAPP2205234848

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 82927

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 82927
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	2/21/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2205234848
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2205234848
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: __Charles Beauvais_____ Title: ___Senior Environmental Engineer_____

Signature:__Charles R. Beauvais II_____ Date: __07/27/2022_____

email: __Charles.R.Beauvais@conocophillips.com_____ Telephone: __575-988-2043_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2205234848
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Charles Beauvais Title: Senior Environmental Engineer

Signature: Charles R. Beauvais II Date: 07/27/2022

email: Charles.R.Beauvais@conocophillips.com Telephone: 575-988-2043

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Jennifer Nobui Date: 08/02/2022

Printed Name: Jennifer Nobui Title: Environmental Specialist A

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 129257

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 129257
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved.	8/2/2022