ENSOLUM

August 29, 2023

New Mexico Oil Conservation Division
New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Request
King Tut Federal CTB
Incident Number NAPP2318734399
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 assessment and soil sampling activities performed at the King Tut Federal CTB (Site). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of produced water within a lined containment at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, COG is submitting this *Closure Request*, describing Site assessment and delineation activities that have occurred and requesting no further action and closure for Incident Number NAPP2318734399.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit D, Section 30, Township 24 South, Range 32 East, in Lea County, New Mexico (32.195°, -103.7183°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On June 23, 2023, internal corrosion of a bull plug resulted in the release of approximately 12.4523 barrels (bbls) of produced water into the lined containment. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 10 bbls of produced water were recovered. COG reported the release via email to the New Mexico Oil Conservation Division (NMOCD) and submitted a *Release Notification Form C-141* (Form C-141) on July 6, 2023. The release was assigned Incident Number NAPP2318734399.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized for applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) 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 C-04665 POD 1, located approximately 0.3 miles east of the Site. The well was drilled during September 2022 to a total depth of

120 feet bgs. No groundwater was encountered. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a freshwater pond, located approximately 1.1 miles south 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 greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. 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 I 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

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

A 48-hour advance notice of the liner inspection was provided via email on July 5, 2023, to the NMOCD. A liner integrity inspection was conducted by Ensolum personnel on July 14, 2023. Upon inspection, the liner was determined to be insufficient. One borehole (BH01) was advanced via hand auger at the location of the tear in the liner to assess for the presence or absence of impacted soil. Discrete delineation soil samples (BH01A/BH01B) were collected from the borehole at depths of 1-foot and 2 feet bgs. The delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations from the borehole were documented on a lithologic/soil sampling log, which is included as Appendix B. The borehole was backfilled with the soil removed and COG repaired the tear in the liner. Four delineation soil samples (SS01 through SS04) were collected around the lined containment at a depth of 0.5 feet bgs to confirm the lateral extent of the release. The delineation soil sample locations are depicted on Figure 2. Photographic documentation was conducted at the Site. A photographic log is included in Appendix C.

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 under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analyses of the following constituents of concern (COCs): 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.

Laboratory analytical results for delineation soil samples BH01A and BH01B, collected at depths of 1-foot and 2-feet bgs beneath the tear in the liner, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and confirmed the absence of impacted soil beneath the liner. Laboratory analytical results for delineation soil samples SS01 through SS04, collected around the lined containment, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

CLOSURE REQUEST

Following the failed liner integrity inspection at the Site, Ensolum personnel advanced one borehole (BH01) at the location of the tear in the liner to assess for the presence or absence of impacted soil resulting from the June 23, 2023, produced water release within the lined containment. Delineation soil samples were collected from the borehole at depths of 1-foot and 2 feet bgs. Laboratory analytical results for delineation soil samples, collected directly beneath the lined containment, indicated all COC concentrations were compliant with the most stringent Table I Site Closure Criteria. Additionally, laboratory analytical results for soil samples SS01 through SS04, collected around the containment, were compliant with the most stringent Table I Closure Criteria. The release was contained laterally within the lined containment. The tear in the liner was subsequently repaired.

Based on initial response efforts, absence of elevated field screening results, and soil sample laboratory analytical results compliant with the Site Closure Criteria directly beneath the tear in the liner, COG respectfully requests closure for Incident Number NAPP2318734399. NMOCD notifications are included in Appendix E and the Form C-141 is included in Appendix F.

If you have any questions or comments, please contact Ms. Hadlie Green at (432) 557-8895 or hgreen@ensolum.com.

Sincerely,
Ensolum, LLC

Hadlie Green
Project Geologist

Daniel R. Moir, PG
Senior Managing Geologist

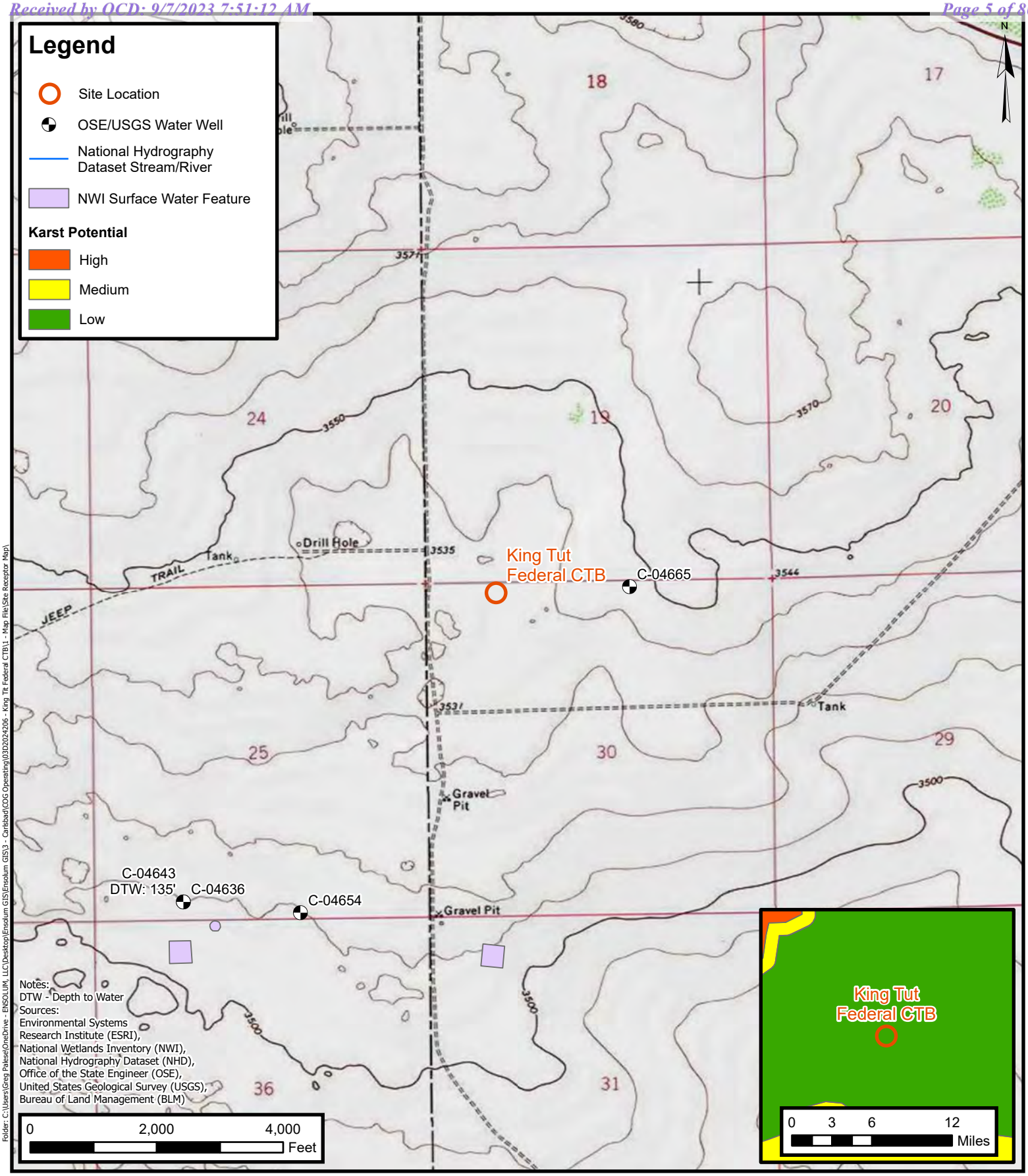
cc: Jacob Laird, COG Operating, LLC
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Lithologic/Soil Sampling Log
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Notifications
Appendix F	Final C-141

ENSOLUM

FIGURES



Folder: C:\Users\Greg Patese\OneDrive - ENSOLUM, LLC\Desktop\Ensolum GIS\Ensolum GIS\3 - Carlsbad\COG Operating\03\20240206 - King Tk Federal CTB\1 - Map File\Site Receptor Map\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

COG Operating, LLC
King Tut Federal CTB
Incident Number: nAPP2318734399
Unit D, Sec 30, T24S, R32E, Lea County

FIGURE
1

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

COG Operating, LLC
King Tut Federal CTB
Incident Number: nAPP2318734399
Unit D, Sec 30, T24S, R32E, Lea County

FIGURE
2

ENSOLUM

TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
King Tut Federal CTB
COG Operating, LLC
Lea County, New Mexico

Sample Designation	Date	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 I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
Delineation Soil Samples										
SS01	07/14/2023	0.5	<0.00200	<0.00401	<50.1	50.1	<50.1	50.1	50.1	38.9
SS02	07/14/2023	0.5	<0.00199	<0.00398	<49.8	64.4	<49.8	64.4	64.4	50.8
SS03	07/14/2023	0.5	<0.00201	<0.00402	<50.2	56.8	<50.2	56.8	56.8	194
SS04	07/14/2023	0.5	<0.00202	<0.00403	<50.4	84.3	<50.4	84.3	84.3	102
BH01A	07/25/2023	1	<0.00200	<0.00401	<49.5	<49.5	<49.5	<49.5	<49.5	423
BH01B	07/25/2023	2	<0.00199	<0.00398	<49.6	<49.6	<49.6	<49.6	<49.6	337

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
NMAC: New Mexico Administrative Code
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon

*Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.*
***Grey** text represents samples that have been excavated*

ENSOLUM

APPENDIX A

Referenced Well Records

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.): C-04665 POD 1	WELL TAG ID NO.:	OSE FILE NO(S).: C-04665
WELL OWNER NAME(S): COG OPERATING LLC		PHONE (OPTIONAL): 575-988-2043
WELL OWNER MAILING ADDRESS: 2208 W MAIN ST		CITY: ARTESIA STATE: NM ZIP: 88210

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	11	42.72	N
	LONGITUDE	-103	42	45.30	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE: KING TUT FEDERAL 001H

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1184	RUSSELL SOUTHERLAND	WEST TEXAS WATER WELL SERVICE

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
9/15/2022	09/15/2022	120		

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): N/A

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
			NO CASING IN HOLE				

OSE DIT SEP 26 2022 PM3:28

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
			N/A		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 04/30/19)

FILE NO. C-04666	POD NO. 1	TRN NO. 732879
LOCATION 24S. 32E. 30 112	WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	1		CALICHIE PAD	Y ✔ N	
1	3		SANDY TOPSOIL	Y ✔ N	
3	25		CALICHIE	Y ✔ N	
25	27		RED SAND	Y ✔ N	
27	120		RED SANDY CLAY	Y ✔ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☑ OTHER – SPECIFY: DRY HOLE

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

OSE DIT SEP 26 2022 PM3:28

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

RUSSELL SOUTHERLAND

6. SIGNATURE

BY SIGNING BELOW, I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED WELL. I ALSO CERTIFY THAT THE WELL TAG, IF REQUIRED, HAS BEEN INSTALLED AND THAT THIS WELL RECORD WILL ALSO BE FILED WITH THE PERMIT HOLDER WITHIN 30 DAYS AFTER THE COMPLETION OF WELL DRILLING.

RUSSELL SOUTHERLAND — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

09/15/2022 — DATE

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 04/30/2019)

FILE NO. C-04665	POD NO. 1	TRN NO. 732879	
LOCATION 24S. 32E. 30 112		WELL TAG ID NO.	PAGE 2 OF 2

Mike A. Hamman, P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 732879
File Nbr: C 04665
Well File Nbr: C 04665

Oct. 04, 2022

KALEI JENNINGS
ENSOLUM
601 N MARIENFIELD ST SUITE 400
MIDLAND, TX 79701

Greetings:

The above numbered permit was issued in your name on 08/26/2022.

The Well Record was received in this office on 09/26/2022, stating that it had been completed on 09/15/2022, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 08/26/2023.

If you have any questions, please feel free to contact us.

Sincerely,

Vanessa Clements

Vanessa Clements
(575)622-6521

drywell

Click to hideNews Bulletins

- How are we doing? We want to hear from you. Take our quick survey to tell us what you think.
- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for New Mexico

Click to hide state-specific text

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321005103402301

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 321005103402301 24S.32E.33.42241

Lea County, New Mexico
Latitude 32°10'21.6", Longitude 103°40'18.9" NAD83
Land-surface elevation 3,499.00 feet above NGVD29
The depth of the well is 367 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1959-02-18		D	62610		3185.60	NGVD29	1	Z		
1959-02-18		D	62611		3187.32	NAVD88	1	Z		
1959-02-18		D	72019	313.40			1	Z		
1981-06-12		D	62610		3194.60	NGVD29	1	Z		
1981-06-12		D	62611		3196.32	NAVD88	1	Z		
1981-06-12		D	72019	304.40			1	Z		
1986-03-11		D	62610		3193.79	NGVD29	1	Z		
1986-03-11		D	62611		3195.51	NAVD88	1	Z		
1986-03-11		D	72019	305.21			1	Z		
1991-05-29		D	62610		3211.55	NGVD29	1	Z		
1991-05-29		D	62611		3213.27	NAVD88	1	Z		
1991-05-29		D	72019	287.45			1	Z		
1996-03-14		D	62610		3213.60	NGVD29	1	S		

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1996-03-14		D	62611		3215.32	NAVD88	1	S		
1996-03-14		D	72019	285.40			1	S		
2001-02-27		D	62610		3210.32	NGVD29	1	S		
2001-02-27		D	62611		3212.04	NAVD88	1	S		
2001-02-27		D	72019	288.68			1	S		
2013-01-17	16:30 UTC	m	62610		3209.31	NGVD29	1	S	USGS	
2013-01-17	16:30 UTC	m	62611		3211.03	NAVD88	1	S	USGS	
2013-01-17	16:30 UTC	m	72019	289.69			1	S	USGS	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

ENSOLUM

APPENDIX B

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: BH01	Date: 7/25/2023
	Site Name: King Tut Federal CTB	
	Incident Number: NAPP2318734399	
	Job Number: 03D2024206	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.195257,103.718499	Hole Diameter:	Total Depth: 4'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included. ND - Non Detect

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
Damp	330	0.0	N	BH01A	1	1	SP-SM	Sand: red, red/brown, medium to fine grain, poorly graided with silt, damp - moist
Damp	ND	0.0	N	BH01B	2	2	SP-SM	SAA (same as above)
Damp	117	0.0	N			3	SP-SM	Sand: red/orange, medium to fine grain, poorly graided with silt, damp
Damp	560	0.0	N			4	SP-SM	SAA TD 4 feet bgs
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

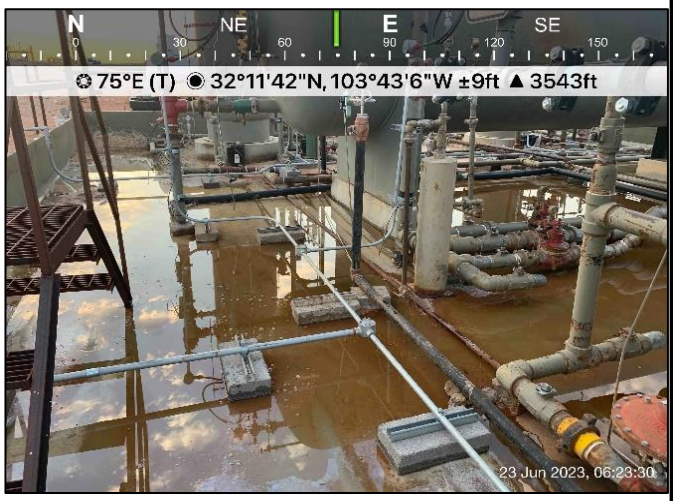
ENSOLUM

APPENDIX C

Photographic Log

ENSOLUM

Photographic Log
COG Operating, LLC
King Tut Federal CTB
Incident Number nAPP2318734399



Photograph: 1 Date: 6/23/2023
Description: Initial release in secondary containment
View: East

Photograph: 2 Date: 7/14/2023
Description: Lined containment in good condition
View: West

Photograph: 3 Date: 7/14/2023
Description: Compromised area in lined containment
View: East

Photograph: 4 Date: 7/25/2023
Description: Delineation activities
View: Northeast

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 8/7/2023 2:39:51 PM

JOB DESCRIPTION

King Tut Federal CTB
SDG NUMBER 03D2024206

JOB NUMBER

890-4989-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

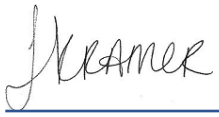
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
8/7/2023 2:39:51 PM

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

Client: Ensolum
Project/Site: King Tut Federal CTB

Laboratory Job ID: 890-4989-1
SDG: 03D2024206

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Client Sample Results 6
Surrogate Summary 8
QC Sample Results 9
QC Association Summary 13
Lab Chronicle 15
Certification Summary 16
Method Summary 17
Sample Summary 18
Chain of Custody 19
Receipt Checklists 20

Definitions/Glossary

Client: Ensolum Job ID: 890-4989-1
Project/Site: King Tut Federal CTB SDG: 03D2024206

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
S1+	Surrogate recovery exceeds control limits, high biased.
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
Project/Site: King Tut Federal CTB

Job ID: 890-4989-1
SDG: 03D2024206

Job ID: 890-4989-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4989-1

Receipt
The samples were received on 7/25/2023 1:03 PM. 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 5.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH01A (890-4989-1) and BH01B (890-4989-2).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: BH01A (890-4989-1) and BH01B (890-4989-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-58869 and analytical batch 880-58801 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-58801 recovered below the lower control limit for Benzene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-58801/33).

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 surrogate recovery for the blank associated with preparation batch 880-59255 and analytical batch 880-59403 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-59403/20) and (CCV 880-59403/5). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-59255 and analytical batch 880-59403 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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 880-58547 and analytical batch 880-58578 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 Tut Federal CTB

Job ID: 890-4989-1
SDG: 03D2024206

Client Sample ID: BH01A

Date Collected: 07/25/23 09:55
Date Received: 07/25/23 13:03
Sample Depth: 1

Lab Sample ID: 890-4989-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/31/23 13:57	07/31/23 22:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/31/23 13:57	07/31/23 22:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/31/23 13:57	07/31/23 22:13	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/31/23 13:57	07/31/23 22:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/31/23 13:57	07/31/23 22:13	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/31/23 13:57	07/31/23 22:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*07/31/23 13:57*	*07/31/23 22:13*	*1*
1,4-Difluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*07/31/23 13:57*	*07/31/23 22:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			08/01/23 09:57	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.5	U	49.5		mg/Kg			08/07/23 14:16	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.5	U	49.5		mg/Kg		08/03/23 14:00	08/06/23 14:24	1
Diesel Range Organics (Over C10-C28)	<49.5	U *+	49.5		mg/Kg		08/03/23 14:00	08/06/23 14:24	1
OII Range Organics (Over C28-C36)	<49.5	U	49.5		mg/Kg		08/03/23 14:00	08/06/23 14:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*08/03/23 14:00*	*08/06/23 14:24*	*1*
o-Terphenyl	*114*		*70 - 130*	*08/03/23 14:00*	*08/06/23 14:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**423**	**F1**	5.05		mg/Kg			07/27/23 21:46	1

Client Sample ID: BH01B

Date Collected: 07/25/23 10:05
Date Received: 07/25/23 13:03
Sample Depth: 2

Lab Sample ID: 890-4989-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/31/23 13:57	07/31/23 22:34	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/31/23 13:57	07/31/23 22:34	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/31/23 13:57	07/31/23 22:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/31/23 13:57	07/31/23 22:34	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/31/23 13:57	07/31/23 22:34	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/31/23 13:57	07/31/23 22:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*07/31/23 13:57*	*07/31/23 22:34*	*1*

Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4989-1
SDG: 03D2024206

Client Sample ID: BH01B
Date Collected: 07/25/23 10:05
Date Received: 07/25/23 13:03
Sample Depth: 2

Lab Sample ID: 890-4989-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*56*	*S1-*	*70 - 130*	*07/31/23 13:57*	*07/31/23 22:34*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			08/01/23 09:57	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			08/07/23 14:16	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		08/03/23 14:00	08/06/23 14:47	1
Diesel Range Organics (Over C10-C28)	<49.6	U *+	49.6		mg/Kg		08/03/23 14:00	08/06/23 14:47	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		08/03/23 14:00	08/06/23 14:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*08/03/23 14:00*	*08/06/23 14:47*	*1*
o-Terphenyl	*111*		*70 - 130*	*08/03/23 14:00*	*08/06/23 14:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**337**		4.99		mg/Kg			07/27/23 22:07	1

Surrogate Summary

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4989-1
SDG: 03D2024206

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)										
890-4989-1	BH01A	84	67 S1-										
890-4989-2	BH01B	82	56 S1-										
890-5004-A-2-E MS	Matrix Spike	100	114										
890-5004-A-2-F MSD	Matrix Spike Duplicate	93	115										
LCS 880-58869/1-A	Lab Control Sample	105	119										
LCSD 880-58869/2-A	Lab Control Sample Dup	108	111										
MB 880-58869/5-A	Method Blank	71	82										

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)										
880-31114-A-1-D MS	Matrix Spike	125	98										
880-31114-A-1-E MSD	Matrix Spike Duplicate	124	99										
890-4989-1	BH01A	122	114										
890-4989-2	BH01B	119	111										
MB 880-59255/1-A	Method Blank	156 S1+	154 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4989-1
SDG: 03D2024206

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-58869/5-A
Matrix: Solid
Analysis Batch: 58801

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58869

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/31/23 11:00	07/31/23 14:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/31/23 11:00	07/31/23 14:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/31/23 11:00	07/31/23 14:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/31/23 11:00	07/31/23 14:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/31/23 11:00	07/31/23 14:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/31/23 11:00	07/31/23 14:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*	*07/31/23 11:00*	*07/31/23 14:41*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*07/31/23 11:00*	*07/31/23 14:41*	*1*

Lab Sample ID: LCS 880-58869/1-A
Matrix: Solid
Analysis Batch: 58801

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58869

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09712		mg/Kg		97	70 - 130		
Toluene			0.100	0.09649		mg/Kg		96	70 - 130		
Ethylbenzene			0.100	0.1093		mg/Kg		109	70 - 130		
m-Xylene & p-Xylene			0.200	0.2274		mg/Kg		114	70 - 130		
o-Xylene			0.100	0.1110		mg/Kg		111	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*119*		*70 - 130*

Lab Sample ID: LCSD 880-58869/2-A
Matrix: Solid
Analysis Batch: 58801

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58869

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09210		mg/Kg		92	70 - 130	5	35
Toluene			0.100	0.09358		mg/Kg		94	70 - 130	3	35
Ethylbenzene			0.100	0.1072		mg/Kg		107	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2224		mg/Kg		111	70 - 130	2	35
o-Xylene			0.100	0.1080		mg/Kg		108	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: 890-5004-A-2-E MS
Matrix: Solid
Analysis Batch: 58801

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58869

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	0.00722		0.0996	0.09015		mg/Kg		83	70 - 130		
Toluene	0.0442	F1	0.0996	0.09568	F1	mg/Kg		52	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4989-1
SDG: 03D2024206

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

Lab Sample ID: 890-5004-A-2-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58801 — **Prep Batch: 58869**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	0.0172	F1	0.0996	0.07072	F1	mg/Kg		54	70 - 130
m-Xylene & p-Xylene	0.0403	F1	0.199	0.1494	F1	mg/Kg		55	70 - 130
o-Xylene	0.00672	F1	0.0996	0.06140	F1	mg/Kg		55	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: 890-5004-A-2-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58801 — **Prep Batch: 58869**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.00722		0.0998	0.08822		mg/Kg		81	70 - 130	2	35
Toluene	0.0442	F1	0.0998	0.1078	F1	mg/Kg		64	70 - 130	12	35
Ethylbenzene	0.0172	F1	0.0998	0.06497	F1	mg/Kg		48	70 - 130	8	35
m-Xylene & p-Xylene	0.0403	F1	0.200	0.1293	F1	mg/Kg		45	70 - 130	14	35
o-Xylene	0.00672	F1	0.0998	0.05217	F1	mg/Kg		46	70 - 130	16	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

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

Lab Sample ID: MB 880-59255/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 59403 — **Prep Batch: 59255**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/23 14:00	08/06/23 08:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/23 14:00	08/06/23 08:22	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/23 14:00	08/06/23 08:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*156*	*S1+*	*70 - 130*	*08/03/23 14:00*	*08/06/23 08:22*	*1*
o-Terphenyl	*154*	*S1+*	*70 - 130*	*08/03/23 14:00*	*08/06/23 08:22*	*1*

Lab Sample ID: LCS 880-59255/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 59403 — **Prep Batch: 59255**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1091		mg/Kg		109	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1432	*+	mg/Kg		143	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4989-1
SDG: 03D2024206

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

Lab Sample ID: LCSD 880-59255/3-A
Matrix: Solid
Analysis Batch: 59403

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 59255

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1083		mg/Kg		108	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1425	*+	mg/Kg		142	70 - 130	1	20

Lab Sample ID: 880-31114-A-1-D MS
Matrix: Solid
Analysis Batch: 59403

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 59255

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	991	822.4		mg/Kg		80	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U *+	991	1171		mg/Kg		118	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*125*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Lab Sample ID: 880-31114-A-1-E MSD
Matrix: Solid
Analysis Batch: 59403

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 59255

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	<49.8	U	991	831.2		mg/Kg		81	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.8	U *+	991	1164		mg/Kg		117	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*124*		*70 - 130*
o-Terphenyl	*99*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-58547/1-A
Matrix: Solid
Analysis Batch: 58578

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/27/23 19:50	1

Lab Sample ID: LCS 880-58547/2-A
Matrix: Solid
Analysis Batch: 58578

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	240.1		mg/Kg		96	90 - 110

QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4989-1
SDG: 03D2024206

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-58547/3-A
Matrix: Solid
Analysis Batch: 58578

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	241.0		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 890-4989-1 MS
Matrix: Solid
Analysis Batch: 58578

Client Sample ID: BH01A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	423	F1	253	632.3	F1	mg/Kg		83	90 - 110		

Lab Sample ID: 890-4989-1 MSD
Matrix: Solid
Analysis Batch: 58578

Client Sample ID: BH01A
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	423	F1	253	633.3	F1	mg/Kg		83	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4989-1
SDG: 03D2024206

GC VOA

Analysis Batch: 58801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4989-1	BH01A	Total/NA	Solid	8021B	58869
890-4989-2	BH01B	Total/NA	Solid	8021B	58869
MB 880-58869/5-A	Method Blank	Total/NA	Solid	8021B	58869
LCS 880-58869/1-A	Lab Control Sample	Total/NA	Solid	8021B	58869
LCSD 880-58869/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58869
890-5004-A-2-E MS	Matrix Spike	Total/NA	Solid	8021B	58869
890-5004-A-2-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	58869

Prep Batch: 58869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4989-1	BH01A	Total/NA	Solid	5035	
890-4989-2	BH01B	Total/NA	Solid	5035	
MB 880-58869/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58869/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58869/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5004-A-2-E MS	Matrix Spike	Total/NA	Solid	5035	
890-5004-A-2-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 58981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4989-1	BH01A	Total/NA	Solid	Total BTEX	
890-4989-2	BH01B	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 59255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4989-1	BH01A	Total/NA	Solid	8015NM Prep	
890-4989-2	BH01B	Total/NA	Solid	8015NM Prep	
MB 880-59255/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-59255/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-59255/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-31114-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-31114-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 59403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4989-1	BH01A	Total/NA	Solid	8015B NM	59255
890-4989-2	BH01B	Total/NA	Solid	8015B NM	59255
MB 880-59255/1-A	Method Blank	Total/NA	Solid	8015B NM	59255
LCS 880-59255/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	59255
LCSD 880-59255/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	59255
880-31114-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	59255
880-31114-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	59255

Analysis Batch: 59524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4989-1	BH01A	Total/NA	Solid	8015 NM	
890-4989-2	BH01B	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4989-1
SDG: 03D2024206

HPLC/IC

Leach Batch: 58547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4989-1	BH01A	Soluble	Solid	DI Leach	
890-4989-2	BH01B	Soluble	Solid	DI Leach	
MB 880-58547/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-58547/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-58547/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4989-1 MS	BH01A	Soluble	Solid	DI Leach	
890-4989-1 MSD	BH01A	Soluble	Solid	DI Leach	

Analysis Batch: 58578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4989-1	BH01A	Soluble	Solid	300.0	58547
890-4989-2	BH01B	Soluble	Solid	300.0	58547
MB 880-58547/1-A	Method Blank	Soluble	Solid	300.0	58547
LCS 880-58547/2-A	Lab Control Sample	Soluble	Solid	300.0	58547
LCSD 880-58547/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	58547
890-4989-1 MS	BH01A	Soluble	Solid	300.0	58547
890-4989-1 MSD	BH01A	Soluble	Solid	300.0	58547

Lab Chronicle

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4989-1
SDG: 03D2024206

Client Sample ID: BH01A
Date Collected: 07/25/23 09:55
Date Received: 07/25/23 13:03

Lab Sample ID: 890-4989-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	58869	07/31/23 13:57	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58801	07/31/23 22:13	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58981	08/01/23 09:57	SM	EET MID
Total/NA	Analysis	8015 NM		1			59524	08/07/23 14:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	59255	08/03/23 14:00	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59403	08/06/23 14:24	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	58547	07/26/23 09:52	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	58578	07/27/23 21:46	CH	EET MID

Client Sample ID: BH01B
Date Collected: 07/25/23 10:05
Date Received: 07/25/23 13:03

Lab Sample ID: 890-4989-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	58869	07/31/23 13:57	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58801	07/31/23 22:34	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58981	08/01/23 09:57	SM	EET MID
Total/NA	Analysis	8015 NM		1			59524	08/07/23 14:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	59255	08/03/23 14:00	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59403	08/06/23 14:47	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	58547	07/26/23 09:52	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	58578	07/27/23 22:07	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4989-1
SDG: 03D2024206

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	T104704400-23-26	06-30-24

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
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4989-1
SDG: 03D2024206

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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:

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

Sample Summary

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4989-1
SDG: 03D2024206

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4989-1	BH01A	Solid	07/25/23 09:55	07/25/23 13:03	1
890-4989-2	BH01B	Solid	07/25/23 10:05	07/25/23 13:03	2

eurofins | Environment Testing Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Hadlie Green	Bill to: (if different)	Hadlie Green
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	432-557-8895	Email:	hgreen@ensolum.com

Work Order Comments

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

Project Name:	King Tut Federal CTB	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024206	Due Date:	
Project Location:	32.195,-103.7183	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Peter Van Patten		
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	NM007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.2	
Total Containers:		Corrected Temperature:	5.0	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
BH01A	Soil	7/25/2023	955	1'	Comp	1		x	x	x
BH01B	Soil	7/25/2023	1005	2'	Comp	1		x	x	x

890-4989 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

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 SiO_2 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 Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7.25.23 1303	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4989-1
SDG Number: 03D2024206

Login Number: 4989
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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.	N/A	Refer to Job Narrative for details.
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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4989-1
SDG Number: 03D2024206

Login Number: 4989
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/26/23 10:54 AM

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

ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 8/10/2023 12:38:48 PM Revision 1

JOB DESCRIPTION

King Tut Federal CTB
SDG NUMBER 03D2024206

JOB NUMBER

890-4953-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

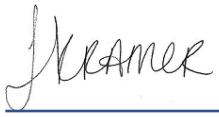
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
8/10/2023 12:38:48 PM
Revision 1

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

Client: Ensolum
Project/Site: King Tut Federal CTB

Laboratory Job ID: 890-4953-1
SDG: 03D2024206

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Client Sample Results 6
Surrogate Summary 9
QC Sample Results 10
QC Association Summary 16
Lab Chronicle 19
Certification Summary 21
Method Summary 22
Sample Summary 23
Chain of Custody 24
Receipt Checklists 25

Definitions/Glossary

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
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 Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

Job ID: 890-4953-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4953-1

REVISION

The report being provided is a revision of the original report sent on 8/7/2023. The report (revision 1) is being revised due to Per client email, requesting TPH re run.

Receipt
The samples were received on 7/17/2023 8:17 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 3.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-4953-1), SS02 (890-4953-2), SS03 (890-4953-3) and SS04 (890-4953-4).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-4956-A-12-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-58267 recovered above the upper control limit for m-Xylene & p-Xylene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-58267/2).

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-58153 and analytical batch 880-58267 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.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-58267 recovered above the upper control limit for Benzene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-58267/51).

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

GC Semi VOA
Method TX_1005: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-58461 and analytical batch 880-58794 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method TX_1005: Surrogate recovery for the following sample was outside control limits: (MB 880-58461/1-A). Evidence of matrix interferences is not obvious.

Method TX_1005: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-59567 and analytical batch 880-59603 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

HPLC/IC
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 Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

Client Sample ID: SS01
Date Collected: 07/14/23 09:47
Date Received: 07/17/23 08:17
Sample Depth: 0.5

Lab Sample ID: 890-4953-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/20/23 14:20	07/22/23 23:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/20/23 14:20	07/22/23 23:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/20/23 14:20	07/22/23 23:18	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/20/23 14:20	07/22/23 23:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/20/23 14:20	07/22/23 23:18	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/20/23 14:20	07/22/23 23:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*07/20/23 14:20*	*07/22/23 23:18*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*07/20/23 14:20*	*07/22/23 23:18*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			07/24/23 09:30	1

Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<50.1	U F1	50.1		mg/Kg		07/25/23 10:18	07/30/23 20:55	1
>C12-C28 Range Hydrocarbons	**50.1**		50.1		mg/Kg		07/25/23 10:18	07/30/23 20:55	1
>C28-C35 Range Hydrocarbons	<50.1	U	50.1		mg/Kg		07/25/23 10:18	07/30/23 20:55	1
Total Petroleum Hydrocarbons (C6-C35)	**50.1**		50.1		mg/Kg			07/31/23 16:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*95*		*70 - 130*	*07/25/23 10:18*	*07/30/23 20:55*	*1*
o-Terphenyl (Surr)	*109*		*70 - 130*	*07/25/23 10:18*	*07/30/23 20:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**38.9**		4.97		mg/Kg			07/19/23 13:40	1

Client Sample ID: SS02
Date Collected: 07/14/23 08:58
Date Received: 07/17/23 08:17
Sample Depth: 0.5

Lab Sample ID: 890-4953-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/20/23 14:20	07/22/23 23:38	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/20/23 14:20	07/22/23 23:38	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/20/23 14:20	07/22/23 23:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/20/23 14:20	07/22/23 23:38	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/20/23 14:20	07/22/23 23:38	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/20/23 14:20	07/22/23 23:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*	*07/20/23 14:20*	*07/22/23 23:38*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*07/20/23 14:20*	*07/22/23 23:38*	*1*

Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

Client Sample ID: SS02
Date Collected: 07/14/23 08:58
Date Received: 07/17/23 08:17
Sample Depth: 0.5

Lab Sample ID: 890-4953-2
Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			07/24/23 09:30	1

Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<49.8	U	49.8		mg/Kg		07/25/23 10:18	08/08/23 14:04	1
>C12-C28 Range Hydrocarbons	**64.4**		49.8		mg/Kg		07/25/23 10:18	08/08/23 14:04	1
>C28-C35 Range Hydrocarbons	<49.8	U	49.8		mg/Kg		07/25/23 10:18	08/08/23 14:04	1
Total Petroleum Hydrocarbons (C6-C35)	**64.4**		49.8		mg/Kg			07/31/23 16:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*80*		*70 - 130*	*07/25/23 10:18*	*08/08/23 14:04*	*1*
o-Terphenyl (Surr)	*81*		*70 - 130*	*07/25/23 10:18*	*08/08/23 14:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50.8**		5.02		mg/Kg			07/19/23 13:45	1

Client Sample ID: SS03
Date Collected: 07/14/23 09:08
Date Received: 07/17/23 08:17
Sample Depth: 0.5

Lab Sample ID: 890-4953-3
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/20/23 14:20	07/22/23 23:59	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/20/23 14:20	07/22/23 23:59	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/20/23 14:20	07/22/23 23:59	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/20/23 14:20	07/22/23 23:59	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/20/23 14:20	07/22/23 23:59	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/20/23 14:20	07/22/23 23:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*07/20/23 14:20*	*07/22/23 23:59*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/20/23 14:20*	*07/22/23 23:59*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/24/23 09:30	1

Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<50.2	U	50.2		mg/Kg		07/25/23 10:18	07/30/23 22:23	1
>C12-C28 Range Hydrocarbons	**56.8**		50.2		mg/Kg		07/25/23 10:18	07/30/23 22:23	1
>C28-C35 Range Hydrocarbons	<50.2	U	50.2		mg/Kg		07/25/23 10:18	07/30/23 22:23	1
Total Petroleum Hydrocarbons (C6-C35)	**56.8**		50.2		mg/Kg			07/31/23 16:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*94*		*70 - 130*	*07/25/23 10:18*	*07/30/23 22:23*	*1*
o-Terphenyl (Surr)	*99*		*70 - 130*	*07/25/23 10:18*	*07/30/23 22:23*	*1*

Client Sample Results

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

Client Sample ID: SS03
Date Collected: 07/14/23 09:08
Date Received: 07/17/23 08:17
Sample Depth: 0.5

Lab Sample ID: 890-4953-3
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**194**		5.05		mg/Kg			07/19/23 13:50	1

Client Sample ID: SS04
Date Collected: 07/14/23 09:14
Date Received: 07/17/23 08:17
Sample Depth: 0.5

Lab Sample ID: 890-4953-4
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/20/23 14:20	07/23/23 00:19	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/20/23 14:20	07/23/23 00:19	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/20/23 14:20	07/23/23 00:19	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/20/23 14:20	07/23/23 00:19	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/20/23 14:20	07/23/23 00:19	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/20/23 14:20	07/23/23 00:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*07/20/23 14:20*	*07/23/23 00:19*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*07/20/23 14:20*	*07/23/23 00:19*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/24/23 09:30	1

Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<50.4	U	50.4		mg/Kg		07/25/23 10:18	07/30/23 22:46	1
>C12-C28 Range Hydrocarbons	**84.3**		50.4		mg/Kg		07/25/23 10:18	07/30/23 22:46	1
>C28-C35 Range Hydrocarbons	<50.4	U	50.4		mg/Kg		07/25/23 10:18	07/30/23 22:46	1
Total Petroleum Hydrocarbons (C6-C35)	**84.3**		50.4		mg/Kg			07/31/23 16:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*108*		*70 - 130*	*07/25/23 10:18*	*07/30/23 22:46*	*1*
o-Terphenyl (Surr)	*120*		*70 - 130*	*07/25/23 10:18*	*07/30/23 22:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**102**		4.98		mg/Kg			07/19/23 13:55	1

Surrogate Summary

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

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)
890-4953-1	SS01	83	83
890-4953-2	SS02	77	71
890-4953-3	SS03	80	87
890-4953-4	SS04	78	75
890-4956-A-12-C MS	Matrix Spike	105	109
890-4956-A-12-D MSD	Matrix Spike Duplicate	67 S1-	102
LCS 880-58153/1-A	Lab Control Sample	107	103
LCSD 880-58153/2-A	Lab Control Sample Dup	114	107
MB 880-58152/5-A	Method Blank	72	87
MB 880-58153/5-A	Method Blank	73	89

Surrogate Legend

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

Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO (70-130)	OTPH (70-130)
880-31760-A-1-B MS	Matrix Spike	80	71
880-31760-A-1-C MSD	Matrix Spike Duplicate	82	72
890-4953-1	SS01	95	109
890-4953-1 MS	SS01	91	96
890-4953-1 MSD	SS01	103	107
890-4953-2	SS02	80	81
890-4953-3	SS03	94	99
890-4953-4	SS04	108	120
LCS 880-58461/2-A	Lab Control Sample	87	97
LCS 880-59567/2-A	Lab Control Sample	112	109
LCSD 880-58461/3-A	Lab Control Sample Dup	83	96
LCSD 880-59567/3-A	Lab Control Sample Dup	97	93
MB 880-58461/1-A	Method Blank	145 S1+	160 S1+
MB 880-59567/1-A	Method Blank	101	106

Surrogate Legend

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-58152/5-A
Matrix: Solid
Analysis Batch: 58267

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58152

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/20/23 14:04	07/22/23 11:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/20/23 14:04	07/22/23 11:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/20/23 14:04	07/22/23 11:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/20/23 14:04	07/22/23 11:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/20/23 14:04	07/22/23 11:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/20/23 14:04	07/22/23 11:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*07/20/23 14:04*	*07/22/23 11:37*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/20/23 14:04*	*07/22/23 11:37*	*1*

Lab Sample ID: MB 880-58153/5-A
Matrix: Solid
Analysis Batch: 58267

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58153

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/20/23 14:20	07/22/23 22:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/20/23 14:20	07/22/23 22:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/20/23 14:20	07/22/23 22:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/20/23 14:20	07/22/23 22:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/20/23 14:20	07/22/23 22:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/20/23 14:20	07/22/23 22:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*	*07/20/23 14:20*	*07/22/23 22:15*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*07/20/23 14:20*	*07/22/23 22:15*	*1*

Lab Sample ID: LCS 880-58153/1-A
Matrix: Solid
Analysis Batch: 58267

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58153

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1275		mg/Kg		127	70 - 130		
Toluene			0.100	0.1089		mg/Kg		109	70 - 130		
Ethylbenzene			0.100	0.1194		mg/Kg		119	70 - 130		
m-Xylene & p-Xylene			0.200	0.2473		mg/Kg		124	70 - 130		
o-Xylene			0.100	0.1220		mg/Kg		122	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-58153/2-A
Matrix: Solid
Analysis Batch: 58267

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58153

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1125		mg/Kg		113	70 - 130	12	35

Eurofins Carlsbad

QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

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

Lab Sample ID: LCSD 880-58153/2-A
Matrix: Solid
Analysis Batch: 58267

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58153

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09756		mg/Kg		98	70 - 130	11	35
Ethylbenzene			0.100	0.1099		mg/Kg		110	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.2298		mg/Kg		115	70 - 130	7	35
o-Xylene			0.100	0.1139		mg/Kg		114	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 890-4956-A-12-C MS
Matrix: Solid
Analysis Batch: 58267

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58153

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F1 F2	0.0994	0.1079		mg/Kg		109	70 - 130
Toluene	<0.00200	U F1 F2	0.0994	0.08779		mg/Kg		87	70 - 130
Ethylbenzene	<0.00200	U F1 F2	0.0994	0.09645		mg/Kg		97	70 - 130
m-Xylene & p-Xylene	<0.00399	U F1 F2	0.199	0.1954		mg/Kg		98	70 - 130
o-Xylene	<0.00200	U F1 F2	0.0994	0.09653		mg/Kg		97	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 890-4956-A-12-D MSD
Matrix: Solid
Analysis Batch: 58267

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58153

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1 F2	0.0998	0.05218	F1 F2	mg/Kg		52	70 - 130	70	35
Toluene	<0.00200	U F1 F2	0.0998	0.04482	F1 F2	mg/Kg		44	70 - 130	65	35
Ethylbenzene	<0.00200	U F1 F2	0.0998	0.04466	F1 F2	mg/Kg		45	70 - 130	73	35
m-Xylene & p-Xylene	<0.00399	U F1 F2	0.200	0.08105	F1 F2	mg/Kg		40	70 - 130	83	35
o-Xylene	<0.00200	U F1 F2	0.0998	0.04170	F1 F2	mg/Kg		41	70 - 130	79	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*67*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Lab Sample ID: MB 880-58461/1-A
Matrix: Solid
Analysis Batch: 58794

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58461

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<50.0	U	50.0		mg/Kg		07/25/23 10:18	07/30/23 19:47	1
>C12-C28 Range Hydrocarbons	<50.0	U	50.0		mg/Kg		07/25/23 10:18	07/30/23 19:47	1

QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC) (Continued)

Lab Sample ID: MB 880-58461/1-A
Matrix: Solid
Analysis Batch: 58794

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58461

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
>C28-C35 Range Hydrocarbons	<50.0	U	50.0		mg/Kg		07/25/23 10:18	07/30/23 19:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*145*	*S1+*	*70 - 130*	*07/25/23 10:18*	*07/30/23 19:47*	*1*
o-Terphenyl (Surr)	*160*	*S1+*	*70 - 130*	*07/25/23 10:18*	*07/30/23 19:47*	*1*

Lab Sample ID: LCS 880-58461/2-A
Matrix: Solid
Analysis Batch: 58794

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58461

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C6-C12 Range Hydrocarbons			1000	873.3		mg/Kg		87	75 - 125		
>C12-C28 Range Hydrocarbons			1000	855.4		mg/Kg		86	75 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*87*		*70 - 130*
o-Terphenyl (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 880-58461/3-A
Matrix: Solid
Analysis Batch: 58794

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58461

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C6-C12 Range Hydrocarbons			1000	806.5		mg/Kg		81	75 - 125	8	25
>C12-C28 Range Hydrocarbons			1000	797.8		mg/Kg		80	75 - 125	7	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*83*		*70 - 130*
o-Terphenyl (Surr)	*96*		*70 - 130*

Lab Sample ID: 890-4953-1 MS
Matrix: Solid
Analysis Batch: 58794

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 58461

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
C6-C12 Range Hydrocarbons	<50.1	U F1	998	725.2	F1	mg/Kg		69	75 - 125		
>C12-C28 Range Hydrocarbons	50.1		998	896.1		mg/Kg		85	75 - 125		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*91*		*70 - 130*
o-Terphenyl (Surr)	*96*		*70 - 130*

Lab Sample ID: 890-4953-1 MSD
Matrix: Solid
Analysis Batch: 58794

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 58461

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C6-C12 Range Hydrocarbons	<50.1	U F1	996	854.9		mg/Kg		82	75 - 125	16	25

QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC) (Continued)

Lab Sample ID: 890-4953-1 MSD — **Client Sample ID: SS01**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58794 — **Prep Batch: 58461**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
>C12-C28 Range Hydrocarbons	50.1		996	994.4		mg/Kg		95	75 - 125	10	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*103*		*70 - 130*
o-Terphenyl (Surr)	*107*		*70 - 130*

Lab Sample ID: MB 880-59567/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 59603 — **Prep Batch: 59567**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<50.0	U	50.0		mg/Kg		08/07/23 17:38	08/08/23 07:50	1
>C12-C28 Range Hydrocarbons	<50.0	U	50.0		mg/Kg		08/07/23 17:38	08/08/23 07:50	1
>C28-C35 Range Hydrocarbons	<50.0	U	50.0		mg/Kg		08/07/23 17:38	08/08/23 07:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*101*		*70 - 130*	*08/07/23 17:38*	*08/08/23 07:50*	*1*
o-Terphenyl (Surr)	*106*		*70 - 130*	*08/07/23 17:38*	*08/08/23 07:50*	*1*

Lab Sample ID: LCS 880-59567/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 59603 — **Prep Batch: 59567**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C6-C12 Range Hydrocarbons			1000	1048		mg/Kg		105	75 - 125		
>C12-C28 Range Hydrocarbons			1000	1040		mg/Kg		104	75 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*112*		*70 - 130*
o-Terphenyl (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-59567/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 59603 — **Prep Batch: 59567**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C6-C12 Range Hydrocarbons			1000	1077		mg/Kg		108	75 - 125	3	25
>C12-C28 Range Hydrocarbons			1000	1020		mg/Kg		102	75 - 125	2	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*97*		*70 - 130*
o-Terphenyl (Surr)	*93*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC) (Continued)

Lab Sample ID: 880-31760-A-1-B MS
Matrix: Solid
Analysis Batch: 59603

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 59567

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
C6-C12 Range Hydrocarbons	<50.0	U	995	886.2		mg/Kg		89	75 - 125
>C12-C28 Range Hydrocarbons	284	F1	995	860.8	F1	mg/Kg		58	75 - 125

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*80*		*70 - 130*
o-Terphenyl (Surr)	*71*		*70 - 130*

Lab Sample ID: 880-31760-A-1-C MSD
Matrix: Solid
Analysis Batch: 59603

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 59567

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C6-C12 Range Hydrocarbons	<50.0	U	995	909.5		mg/Kg		91	75 - 125	3	25
>C12-C28 Range Hydrocarbons	284	F1	995	880.5	F1	mg/Kg		60	75 - 125	2	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*82*		*70 - 130*
o-Terphenyl (Surr)	*72*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-57838/1-A
Matrix: Solid
Analysis Batch: 58048

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/19/23 12:36	1

Lab Sample ID: LCS 880-57838/2-A
Matrix: Solid
Analysis Batch: 58048

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	241.1		mg/Kg		96	90 - 110

Lab Sample ID: LCSD 880-57838/3-A
Matrix: Solid
Analysis Batch: 58048

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	240.8		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 880-30781-A-21-E MS
Matrix: Solid
Analysis Batch: 58048

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	460		250	707.6		mg/Kg		99	90 - 110

QC Sample Results

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-30781-A-21-F MSD
Matrix: Solid
Analysis Batch: 58048

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	460		250	706.6		mg/Kg		99	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

GC VOA

Prep Batch: 58152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-58152/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 58153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4953-1	SS01	Total/NA	Solid	5035	
890-4953-2	SS02	Total/NA	Solid	5035	
890-4953-3	SS03	Total/NA	Solid	5035	
890-4953-4	SS04	Total/NA	Solid	5035	
MB 880-58153/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58153/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58153/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4956-A-12-C MS	Matrix Spike	Total/NA	Solid	5035	
890-4956-A-12-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 58267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4953-1	SS01	Total/NA	Solid	8021B	58153
890-4953-2	SS02	Total/NA	Solid	8021B	58153
890-4953-3	SS03	Total/NA	Solid	8021B	58153
890-4953-4	SS04	Total/NA	Solid	8021B	58153
MB 880-58152/5-A	Method Blank	Total/NA	Solid	8021B	58152
MB 880-58153/5-A	Method Blank	Total/NA	Solid	8021B	58153
LCS 880-58153/1-A	Lab Control Sample	Total/NA	Solid	8021B	58153
LCSD 880-58153/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58153
890-4956-A-12-C MS	Matrix Spike	Total/NA	Solid	8021B	58153
890-4956-A-12-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	58153

Analysis Batch: 58329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4953-1	SS01	Total/NA	Solid	Total BTEX	
890-4953-2	SS02	Total/NA	Solid	Total BTEX	
890-4953-3	SS03	Total/NA	Solid	Total BTEX	
890-4953-4	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 58461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4953-1	SS01	Total/NA	Solid	TX_1005_S_Prep	
890-4953-3	SS03	Total/NA	Solid	TX_1005_S_Prep	
890-4953-4	SS04	Total/NA	Solid	TX_1005_S_Prep	
MB 880-58461/1-A	Method Blank	Total/NA	Solid	TX_1005_S_Prep	
LCS 880-58461/2-A	Lab Control Sample	Total/NA	Solid	TX_1005_S_Prep	
LCSD 880-58461/3-A	Lab Control Sample Dup	Total/NA	Solid	TX_1005_S_Prep	
890-4953-1 MS	SS01	Total/NA	Solid	TX_1005_S_Prep	

QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

GC Semi VOA (Continued)

Prep Batch: 58461 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4953-1 MSD	SS01	Total/NA	Solid	TX_1005_S_Prep	

Analysis Batch: 58794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4953-1	SS01	Total/NA	Solid	TX 1005	58461
890-4953-3	SS03	Total/NA	Solid	TX 1005	58461
890-4953-4	SS04	Total/NA	Solid	TX 1005	58461
MB 880-58461/1-A	Method Blank	Total/NA	Solid	TX 1005	58461
LCS 880-58461/2-A	Lab Control Sample	Total/NA	Solid	TX 1005	58461
LCSD 880-58461/3-A	Lab Control Sample Dup	Total/NA	Solid	TX 1005	58461
890-4953-1 MS	SS01	Total/NA	Solid	TX 1005	58461
890-4953-1 MSD	SS01	Total/NA	Solid	TX 1005	58461

Analysis Batch: 58947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4953-1	SS01	Total/NA	Solid	TX 1005	
890-4953-2	SS02	Total/NA	Solid	TX 1005	
890-4953-3	SS03	Total/NA	Solid	TX 1005	
890-4953-4	SS04	Total/NA	Solid	TX 1005	

Prep Batch: 59567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4953-2	SS02	Total/NA	Solid	TX_1005_S_Prep	
MB 880-59567/1-A	Method Blank	Total/NA	Solid	TX_1005_S_Prep	
LCS 880-59567/2-A	Lab Control Sample	Total/NA	Solid	TX_1005_S_Prep	
LCSD 880-59567/3-A	Lab Control Sample Dup	Total/NA	Solid	TX_1005_S_Prep	
880-31760-A-1-B MS	Matrix Spike	Total/NA	Solid	TX_1005_S_Prep	
880-31760-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	TX_1005_S_Prep	

Analysis Batch: 59603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4953-2	SS02	Total/NA	Solid	TX 1005	59567
MB 880-59567/1-A	Method Blank	Total/NA	Solid	TX 1005	59567
LCS 880-59567/2-A	Lab Control Sample	Total/NA	Solid	TX 1005	59567
LCSD 880-59567/3-A	Lab Control Sample Dup	Total/NA	Solid	TX 1005	59567
880-31760-A-1-B MS	Matrix Spike	Total/NA	Solid	TX 1005	59567
880-31760-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	TX 1005	59567

HPLC/IC

Leach Batch: 57838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4953-1	SS01	Soluble	Solid	DI Leach	
890-4953-2	SS02	Soluble	Solid	DI Leach	
890-4953-3	SS03	Soluble	Solid	DI Leach	
890-4953-4	SS04	Soluble	Solid	DI Leach	

QC Association Summary

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

HPLC/IC (Continued)

Leach Batch: 57838 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-57838/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-57838/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-57838/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-30781-A-21-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-30781-A-21-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 58048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4953-1	SS01	Soluble	Solid	300.0	57838
890-4953-2	SS02	Soluble	Solid	300.0	57838
890-4953-3	SS03	Soluble	Solid	300.0	57838
890-4953-4	SS04	Soluble	Solid	300.0	57838
MB 880-57838/1-A	Method Blank	Soluble	Solid	300.0	57838
LCS 880-57838/2-A	Lab Control Sample	Soluble	Solid	300.0	57838
LCSD 880-57838/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	57838
880-30781-A-21-E MS	Matrix Spike	Soluble	Solid	300.0	57838
880-30781-A-21-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	57838

Lab Chronicle

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

Client Sample ID: SS01
Date Collected: 07/14/23 09:47
Date Received: 07/17/23 08:17

Lab Sample ID: 890-4953-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	58153	07/20/23 14:20	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58267	07/22/23 23:18	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58329	07/24/23 09:30	SM	EET MID
Total/NA	Prep	TX_1005_S_Prep			9.98 g	10 mL	58461	07/25/23 10:18	TKC	EET MID
Total/NA	Analysis	TX 1005		1	1 uL	1 uL	58794	07/30/23 20:55	AJ	EET MID
Total/NA	Analysis	TX 1005		1			58947	07/31/23 16:27	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	57838	07/19/23 12:21	KS	EET MID
Soluble	Analysis	300.0		1			58048	07/19/23 13:40	CH	EET MID

Client Sample ID: SS02
Date Collected: 07/14/23 08:58
Date Received: 07/17/23 08:17

Lab Sample ID: 890-4953-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	58153	07/20/23 14:20	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58267	07/22/23 23:38	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58329	07/24/23 09:30	SM	EET MID
Total/NA	Prep	TX_1005_S_Prep			10.04 g	10 mL	59567	07/25/23 10:18	TKC	EET MID
Total/NA	Analysis	TX 1005		1	1 uL	1 uL	59603	08/08/23 14:04	AJ	EET MID
Total/NA	Analysis	TX 1005		1			58947	07/31/23 16:27	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	57838	07/19/23 12:21	KS	EET MID
Soluble	Analysis	300.0		1			58048	07/19/23 13:45	CH	EET MID

Client Sample ID: SS03
Date Collected: 07/14/23 09:08
Date Received: 07/17/23 08:17

Lab Sample ID: 890-4953-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	58153	07/20/23 14:20	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58267	07/22/23 23:59	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58329	07/24/23 09:30	SM	EET MID
Total/NA	Prep	TX_1005_S_Prep			9.97 g	10 mL	58461	07/25/23 10:18	TKC	EET MID
Total/NA	Analysis	TX 1005		1	1 uL	1 uL	58794	07/30/23 22:23	AJ	EET MID
Total/NA	Analysis	TX 1005		1			58947	07/31/23 16:27	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	57838	07/19/23 12:21	KS	EET MID
Soluble	Analysis	300.0		1			58048	07/19/23 13:50	CH	EET MID

Client Sample ID: SS04
Date Collected: 07/14/23 09:14
Date Received: 07/17/23 08:17

Lab Sample ID: 890-4953-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	58153	07/20/23 14:20	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58267	07/23/23 00:19	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58329	07/24/23 09:30	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

Client Sample ID: SS04
Date Collected: 07/14/23 09:14
Date Received: 07/17/23 08:17

Lab Sample ID: 890-4953-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			9.93 g	10 mL	58461	07/25/23 10:18	TKC	EET MID
Total/NA	Analysis	TX 1005		1	1 uL	1 uL	58794	07/30/23 22:46	AJ	EET MID
Total/NA	Analysis	TX 1005		1			58947	07/31/23 16:27	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57838	07/19/23 12:21	KS	EET MID
Soluble	Analysis	300.0		1			58048	07/19/23 13:55	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

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	T104704400-23-26	06-30-24

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
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
TX 1005	Texas - Total Petroleum Hydrocarbon (GC)	TCEQ	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID
TX_1005_S_Prep	Extraction - Texas Total petroleum Hyrdocarbons	TCEQ	EET MID

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL SOP = TestAmerica Laboratories, Standard Operating Procedure
TCEQ = Texas Commission of Environmental Quality

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: King Tut Federal CTB

Job ID: 890-4953-1
SDG: 03D2024206

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4953-1	SS01	Solid	07/14/23 09:47	07/17/23 08:17	0.5
890-4953-2	SS02	Solid	07/14/23 08:58	07/17/23 08:17	0.5
890-4953-3	SS03	Solid	07/14/23 09:08	07/17/23 08:17	0.5
890-4953-4	SS04	Solid	07/14/23 09:14	07/17/23 08:17	0.5

eurofins | Environment Testing Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Hadlie Green	Bill to: (if different)	Kalie Jennings
Company Name:	Ensolum LLC	Company Name:	
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	432-557-8895	Email:	hgreen@ensolum.com

Work Order Comments

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

Project Name:	King Tut Federal CTB	**Turn Around**	
Project Number:	03D2024206	☑ Routine ☐ Rush	
Project Location:	32.195, -103.7183	Due Date:	
Sampler's Name:	Ronni Hayes	TAT starts the day received by the lab, if received by 4:30pm	
Cost Center #:			

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM022	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	33.6	
Total Containers:		Corrected Temperature:	33.4	

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2S0_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH(TX1005)	BTEX(8021B)	Sample Comments
SS01	S	7/14/2023	947	0.5	Grab	1		X	X	X	
SS02	S	7/14/2023	858	0.5	Grab	1		X	X	X	
SS03	S	7/14/2023	908	0.5	Grab	1		X	X	X	
SS04	S	7/14/2023	914	0.5	Grab	1		X	X	X	

Parameters

890-4953 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 SiO_2 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 Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7.17.23 817	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4953-1
SDG Number: 03D2024206

Login Number: 4953
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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.	N/A	Refer to Job Narrative for details.
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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4953-1
SDG Number: 03D2024206

Login Number: 4953
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/18/23 11:21 AM

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 E

NMOCD Notifications

From: Buchanan, Michael, EMNRD
To: Hadlie Green; Enviro, OCD, EMNRD; Velez, Nelson, EMNRD
Cc: Kalei Jennings; Peter Van Patten
Subject: RE: [EXTERNAL] COG - Containment Inspection - King Tut Federal CTB (Spill Date 6/23/2023)
Date: Wednesday, July 5, 2023 3:11:12 PM
Attachments: image001.png
image002.png
image003.png
image004.png
image005.jpg

[**EXTERNAL EMAIL**]

Good afternoon,

Thank you for the notification. Please include a copy of this and all notifications in the C-141, remedial and/or closure reports to ensure the notifications are documented in the project file.

Regards,

Mike Buchanan ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
8801 Horizon Blvd. NE | Albuquerque, NM 87113
| michael.buchanan@emnrd.nm.gov
http://www.emnrd.nm.gov/ocd

From: Hadlie Green <hgreen@ensolum.com>
Sent: Wednesday, July 5, 2023 1:38 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>; Peter Van Patten <pvanpatten@ensolum.com>
Subject: [EXTERNAL] COG - Containment Inspection - King Tut Federal CTB (Spill Date 6/23/2023)

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

To Whom It May Concern,

Below is an email notification for liner inspection at COG Operating, LLC (COG) King Tut Federal CTB (Spill Date 6/23/2023). This is a notification that Ensolum is scheduled to inspect this lined containment on behalf of COG on Friday, July 14, 2023. Please call with any questions or concerns.

GPS: 32.1954, -103.719

Thank you,

Hadlie Green
Project Geologist
432-557-8895
hgreen@ensolum.com
Ensolum, LLC

From: Wells, Shelly, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD
Subject: RE: [EXTERNAL] COP - Sampling Notification (Week of 7/24/2023)
Date: Wednesday, July 19, 2023 4:01:22 PM
Attachments: image001.png
image002.png
image003.png
image004.png

[**EXTERNAL EMAIL**]

Hi Hadlie,

The OCD has received your notification. 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.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Administrative Permitting Program
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Hadlie Green <hgreen@ensolum.com>
Sent: Wednesday, July 19, 2023 1:43 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Peter Van Patten <pvanpatten@ensolum.com>; Laird, Jacob <Jacob.Laird@conocophillips.com>; Esparza, Brittany <brittany.esparza@conocophillips.com>; Carlile, Justin <Justin.Carlile@conocophillips.com>
Subject: [EXTERNAL] COP - Sampling Notification (Week of 7/24/2023)

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

All,

ConocoPhillips Company (COP) plans to complete sampling activities at the following sites the week of July 24, 2023.

- King Tut Federal CTB / NAPP2319132381

  - Sampling Date: 7/24/2023 @ 0900 MST

- King Tut Federal CTB / NAPP2318734399
  - Sampling Date: 7/25/2023 @1200 MST

- Superman Water Treatment Facility / NAPP2319140286
  - Sampling Date: 7/26-27/2023 @ 0900 MST

Thank you,

Hadlie Green
Project Geologist
432-557-8895
hgreen@ensolum.com
Ensolum, LLC

ENSOLUM

APPENDIX F

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	NAPP2318734399
District RP	
Facility ID	fAPP2203843099
Application ID	

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Jacob Laird	Contact Telephone	(575) 703-5482
Contact email	Jacob.Laird@ConocoPhillips.com	Incident # *(assigned by OCD)*	NAPP2318734399
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.195 Longitude -103.7183
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	King Tut Federal CTB	Site Type	Tank Battery
Date Release Discovered	June 23, 2023	API# *(if applicable)*	

Unit Letter	Section	Township	Range	County
D	30	24S	32E	Lea

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) 12.4523	Volume Recovered (bbls) 10
	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

The release was caused by a 2 inch bull plug leak due to corrosion.
The release occurred within a falcon lined facility. A vacuum truck was dispatched to remove all freestanding fluids. Evaluation will be made of the spill area for any possible impact from the release.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2318734399
District RP	
Facility ID	fAPP2203843099
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: Brittany N. Esparza Title: Environmental Technician

Signature: Brittany Esparza Date: 7/6/2023

email: Brittany.Esparza@ConocoPhillips.com Telephone: (432) 221-0398

OCD Only

Received by: Shelly Wells Date: 7/6/2023

Spill Calculation - On-Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Average Depth (in.)	Estimated *Pool* Area (sq. ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)
Rectangle A	22	40	1.0	880.00	13.05	0.00	13.11
Rectangle B				0.00	0.00	0.00	0.00
Rectangle C				0.00	0.00	0.00	0.00
Rectangle D				0.00	0.00	0.00	0.00
Rectangle E				0.00	0.00	0.00	0.00
Rectangle F				0.00	0.00	0.00	0.00
Rectangle G				0.00	0.00	0.00	0.00
Rectangle H				0.00	0.00	0.00	0.00
Rectangle I				0.00	0.00	0.00	0.00
Rectangle J				0.00	0.00	0.00	0.00
						Total Volume Release, Soil not impacted:	12.4523

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

Operator: COG PRODUCTION, LLC 600 W. Illinois Ave Midland, TX 79701	OGRID: 217955
	Action Number: 236495
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	7/6/2023

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2318734399
District RP	
Facility ID	fAPP2203843099
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	NAPP2318734399
District RP	
Facility ID	fAPP2203843099
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: __Jacob Laird_____ Title: _Environmental Engineer_____

Signature: Jacob Laird Date: _____8/29/2023_____

email: __Jacob.Laird@conocophillips.com_____ Telephone: ___575-703-5482_____

OCD Only

Received by: Shelly Wells Date: 9/7/2023

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2318734399
District RP	
Facility ID	fAPP2203843099
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: Jacob Laird Title: Environmental Engineer

Signature: Jacob Laird Date: 8/29/2023

email: Jacob.Laird@ConocoPhillips.com Telephone: 575-703-5482

OCD Only

Received by: Shelly Wells Date: 9/7/2023

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: Nelson Velez Date: 12/29/2023

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

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 262923

CONDITIONS

Operator: COG PRODUCTION, LLC 600 W. Illinois Ave Midland, TX 79701	OGRID: 217955
	Action Number: 262923
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Liner inspection approved. Release resolved.	12/29/2023